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ARS-155

May 2000

Annotated List of the Flora of the Beltsville Agricultural Research Center, Beltsville, Maryland



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E.E. Terrell, J.L. Reveal, R.W. Spjut, R.F. Whitcomb,
J.H. Kirkbride, Jr., M.T. Cimino, and M.T. Strong

Abstract

Terrell, E.E., J.L. Reveal, R.W. Spjut, R.F. Whitcomb, J.H. Kirkbride, Jr., M.T. Cimino, and M.T. Strong. 2000. Annotated list of the flora of the Beltsville Agricultural Research Center, Beltsville, Maryland. U.S. Department of Agriculture, Agricultural Research Service, ARS-155.

This annotated list of the flora of the Beltsville Agricultural Research Center, Prince George's County, Maryland, provides scientific names and selected common names for 901 native and naturalized plant species. This total includes 13 species of lichens, 71 mosses, 24 ferns and fern allies, 7 gymnosperms, and 786 angiosperm species (526 dicots and 260 monocots). Also listed are 32 angiosperm species planted in experimental meadows. The center is partitioned into five farms and four research forests. For each species data are provided concerning habitats and frequency of occurrence. A special project dealing with experimental meadows is discussed in detail. Lists of representative tree species are presented to highlight the common or dominant species. The occurrences of rare species, as well as pernicious weeds, are noted. Up-to-date scientific nomenclature is based largely on the database of the computerized Germplasm Resources Information Network (GRIN) of the USDA, Agricultural Research Service. Several taxonomic specialists have contributed their expertise concerning the more difficult angiosperm species.

Keywords: angiosperms, Ascomycophyta, Beltsville Agricultural Research Center, Bryophyta, club-mosses, dicotyledons, Equisetophyta, ferns, gymnosperms, horsetails, lichens, Liliopsida, Lycopodiophyta, Magnoliophyta, Magnoliopsida, Maryland, meadows, monocotyledons, mosses, Pinophyta, plant communities, Polypodiophyta, Prince George's County, spike-mosses.

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Acknowledgments

We thank the following persons for identifications of difficult genera or species (cited previously in the Introduction): Michel Lelong, Stephen Darbyshire, Charles Davis, Neil Harriman, Paul Peterson, Robert Soreng, and John Wiersema. The following persons have contributed collections or data: Rose Broome, Mark Burchick, James Duke, Jeff Lerner, Sandra Sauffurer, Rod Simmons, and Hope Stanton. We thank John Wiersema for his cooperation in accessing and checking GRIN nomenclature, and Harold Robinson for checking Asteraceae and lichen and moss nomenclature. David Lellinger reviewed the ferns. Christopher Frye, Maryland Department of Natural Resources, reviewed *Carex* and supplied data on rare species.

James Plaskowitz prepared and printed the electronic version of the maps. We are also grateful to Kevin Thorpe, Chairman of the BARC Ecology Committee, for his collections and valuable support of this project. Tim Badger, Chief of Farm Operations, guided our arrangements for collecting in various sections of BARC and provided important information. The following Beltsville Area administrators, Daryl Cole, Phyllis Johnson, and Darwin Murrell, have supported our activities and arranged for funds for herbarium work and publication. We thank Charles Davis, Aaron Goldberg, Paul Peterson, Stanwyn Shetler, and John Wiersema for very helpful reviews of the manuscript.

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Annotated list of the flora of the Beltsville Agricultural Research Center, Beltsville, Maryland

by E.E. Terrell, J.L. Reveal, R.W. Spjut, R.F. Whitcomb,
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The Beltsville Agricultural Research Center (BARC) of the U. S. Department of Agriculture (USDA) is located in Prince George's County, Maryland, about six miles northeast of the District of Columbia (Fig. 1). It comprises about 6,866 acres (2,780 hectares) of level or rolling terrain just east of the Fall Line, a meeting place of the floras of the Atlantic Coastal Plain and Piedmont Provinces. This annotated list of the BARC flora includes mosses, lichens, and native and naturalized vascular plant species. In addition, we include 32 vascular species (denoted by asterisks) planted in recent years in experimental meadows.

The coordinates of the Center are approximately 39° N latitude and 76° 50' W longitude. The elevation ranges from approximately 40 to 260 feet (12–80 m) above sea level. Data from weather stations on BARC, as collected by George Meyers of the Farm Operations Branch, are as follows for 1995–1998: The annual maximum temperature was 101° F. (38.3° C.) in August 1997; annual minimum temperature 13° F. (-10.6° C.) in February 1996; annual average temperature 55° F.

(12.8° C.); average annual total precipitation 37.75 inches (958.9 mm); maximum annual total snow depth 51.2 inches (1.3 m) in 1996; minimum annual total snow depth 1 inch (0.03 m) in 1998; and average annual total snow depth 28.5 inches (0.7 m). Hotchkiss and Stewart (1979) presented climatic data for the adjacent Patuxent Wildlife Research Center (Department of the Interior).

Agricultural areas and plant communities

Within the Center a variety of soil types, soil acidities, moisture conditions, land uses, and historical changes guarantee substantial habitat diversity. The majority of the forested land (3,074 acres; 1,244 hectares) is riparian buffer between streams and open land. The main activities of the Center involve experimental work on many aspects of agriculture, including the growing of corn, wheat, soybeans, and other crops, as well as the operation of an active animal sciences program emphasizing dairy science, poultry research, and swine production.

Certain adjacent areas were formerly part of the Center, but have recently been transferred to other government departments. The Beltsville Airport was originally wholly a property of the USDA, but was abandoned, and outlying sections of it were transferred to the Department of the Interior as part of the Patuxent Wildlife Research Center (PWRC). Plants collected at the Airport were sometimes difficult to designate as occurring on the land of either department, and a few species are included in the present list regardless of their exact locations on the Airport property. One listed species, *Magnolia acuminata*, that was formerly on USDA land, is on adjacent State Department property. The Treasury Department and NASA (National Aeronautics and Space Administration) also now hold substantial tracts that were once USDA property.

Terrell is a Collaborator, Department of Botany, Smithsonian Institution, and retired taxonomic botanist, USDA, ARS, Beltsville; presently at 14001 Wildwood Drive, Silver Spring MD 20905. Reveal is a systematic botanist and Professor Emeritus, University of Maryland, College Park, Maryland; presently at 18625 Spring Canyon Road, Montrose, CO 81401. Spjut is a retired USDA, ARS botanist, and currently Director of World Botanical Associates, P.O. Box 2829, Laurel, MD 20709. Whitcomb is a retired ecologist and now Collaborator, USDA, ARS; current address at Bee Research Center, 2000 East Allen Road, Tucson, AZ 85719. Kirkbride is a Research Botanist with USDA, ARS, Systematic Botany and Mycology Laboratory, Rm. 304, Bldg. 011A, BARC-West, Beltsville, MD 20705-2350, E-mail: joe@nt.ars-grin.gov. Cimino is a graduate student, Department of Cell Biology and Molecular Genetics, University of Maryland, College Park, MD 20742. Strong is a taxonomic botanist and Museum Specialist with the Department of Botany, Smithsonian Institution, Washington, DC 20560. Address requests for reprints and correspondence to Kirkbride.

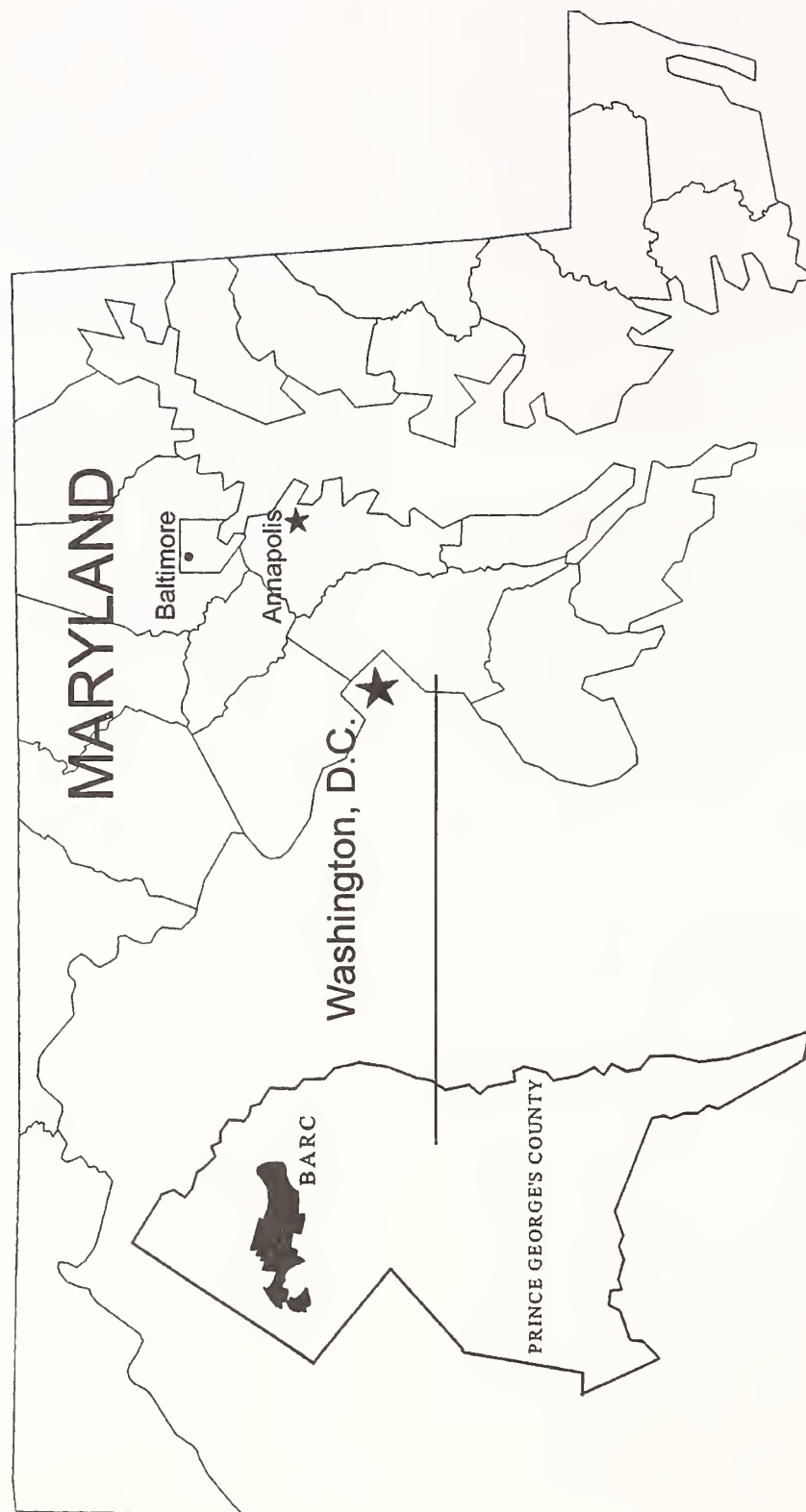


Figure 1. Location of Beltsville Agricultural Research Center in Prince George's County, Maryland.

The Agricultural Research Center is divided into five Farms. In 1985, and shortly thereafter, four Research Forests were designated within two of these Farms.

The North and South Farms (Fig. 2) have been partly reserved for field plot experiments on various horticultural and vegetable crops. The North Farm (548 acres; 222 hectares) includes administration and research buildings along the west side of U. S. Route 1 (Baltimore-Washington Boulevard), and extends west and north to include cultivated fields and meadows adjoining Sellman Road and Cherry Hill Road, as well as some forest. The Little Paint Branch Creek provides habitats for riparian plant species. Six experimental meadows are located on the North Farm.

The South Farm (367 acres; 149 hectares) is a separate tract south of the Washington Beltway (I-495) and Cherry Hill Road. It is a mosaic of experimental fields, fallow fields, well drained oak forest, and poorly drained lowland forest. Riparian habitats occur along Paint Branch Creek.

The Linkage Farm (Fig. 2), a tract of 460 acres (186 hectares), lies between Edmonston Road and Rhode Island Avenue, connecting the North Farm with the Central Farm. The National Agricultural Library occupies an area on the east side of U. S. Route 1 opposite the main buildings of the North Farm, and its grounds include nineteen experimental meadows. The Linkage Farm is bisected into north and south segments by Sunnyside Avenue. An extensive swamp forest (271 acres; 110 hectares) along Indian Creek parallels Edmonston Road. Several herbaceous species absent or rare elsewhere (e.g., *Panax trifolius*, *Uvularia sessilifolia*, and *Veratrum viride*) occur on the forest floor. In August 1998

in a slightly drier area of swamp forest adjacent to Sunnyside Road the following representative tree species were recorded: *Acer rubrum*, *Fagus grandifolia*, *Liquidambar styraciflua*, *Liriodendron tulipifera*, *Quercus alba*, *Q. palustris*, and *Q. phellos*. In the understory *Lindera benzoin* was prominent, and frequently the pernicious weedy grass *Microstegium vimineum* had invaded open places.

The Central Farm (Fig. 3) is a large tract of 3,010 acres (1,218 hectares) of which 1,408 acres (570 hectares) are forested. It lies east of Edmonston Road and extends to the Baltimore-Washington Parkway. The Log Lodge National Visitor Center area includes a small pond established long ago by an iron mining operation. This pond supports much *Nuphar advena* and a dense cover of duckweeds (*Lemna*). A smaller pond in the forest to the south is entirely dominated by duckweeds. To the southwest of the Log Lodge area, on both sides of Research Road, an open swamp occupies the bottomland along Beaver Dam Creek. The swamp, formed by beaver activity, has much *Peltandra virginica* and scattered plants of *Iris versicolor*, *Polygonum arifolium*, and other wetland species. Entomology Road in the north part of the Central Farm parallels an extensive wooded area and a large experimental meadow by Building 465. A fairly large pond is located in the forest at the end of Entomology Road and a smaller pond is to the west of Entomology Road. Another part of the Central Farm lies at the end of Poultry Road, where there are several meadows under active study, including an oak savanna with scattered large oaks (see comments under meadows).

The Central Farm also includes the extensive Bottomland Research Forest intersected by Beaver Dam Road. This forest lies along Beaver Dam Creek just west of the Baltimore-Washington

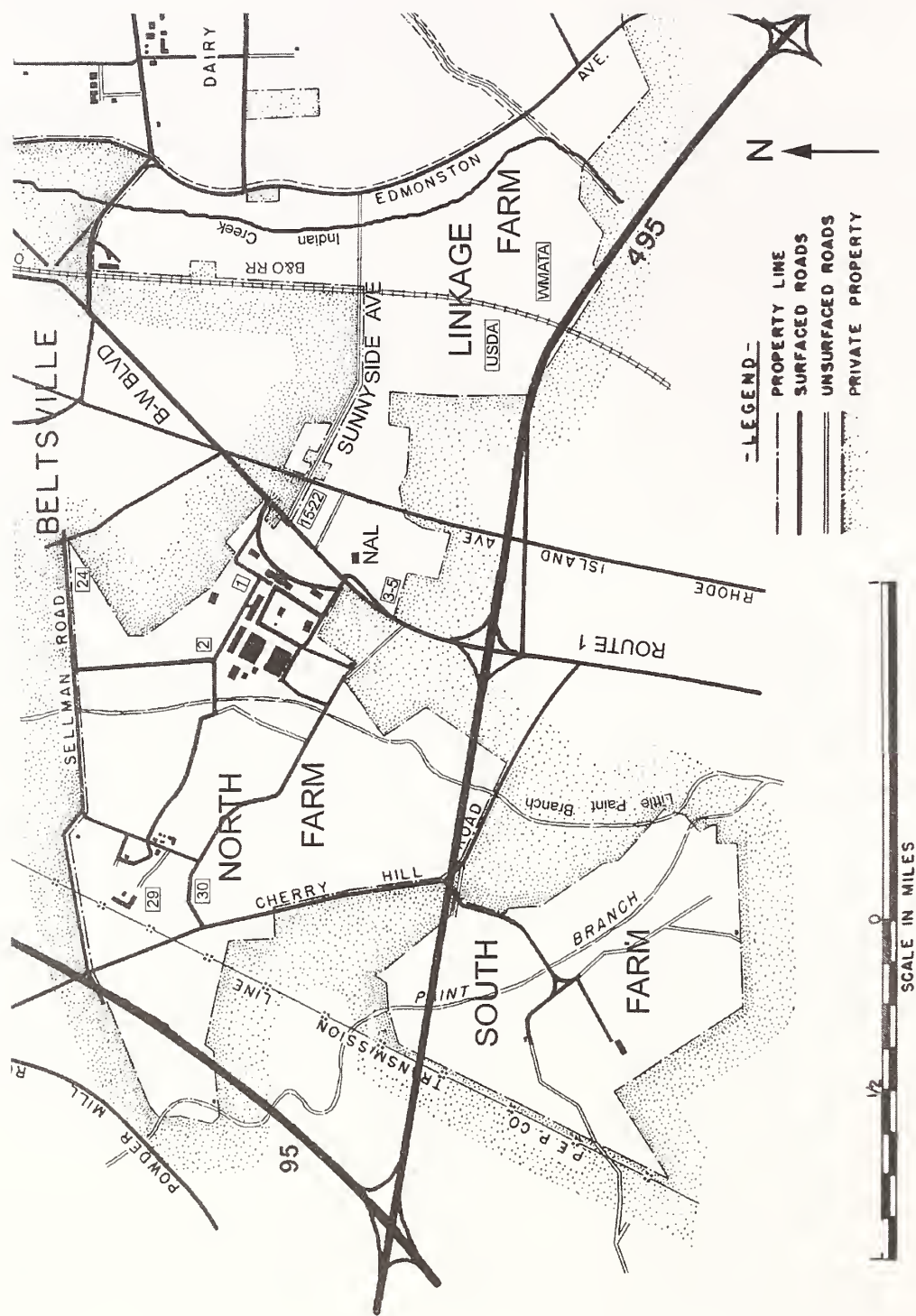


Figure 2. South, North, and Linkage Farms of Beltsville Agricultural Research Center in Prince George's County, Maryland. B&ORR, Baltimore and Ohio Railroad Tracks; B-W BLVD, Baltimore-Washington Boulevard (U. S. Route 1). NAL, National Agricultural Library; USDA, U. S. Department of Agriculture Office Complex; Other abbreviations explained in text. Meadows numbered within squares: Building 011A Upland Meadow [1]; Building 011A Wet Meadow [2]; NAL South Meadows [3-5]; NAL North Meadows [15-22]; Sellman Road Meadows [24]; Cherry Hill Meadows [29,30].

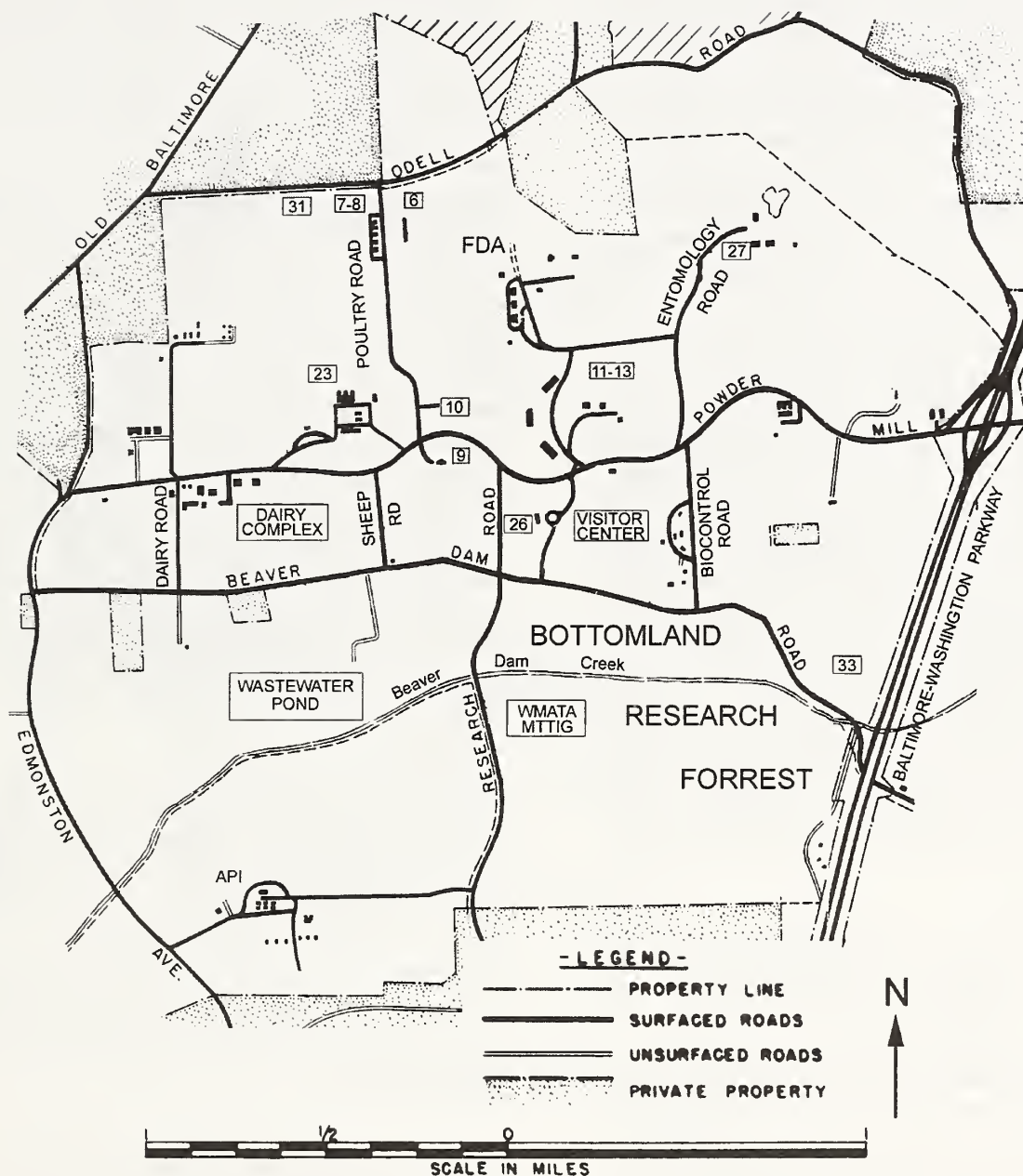


Figure 3. Central Farm of Beltsville Agricultural Research Center in Prince George's County, Maryland. API, Animal Parasitology Institute; FDA complex formerly leased to Food and Drug Administration; VISITOR CENTER, "Log Lodge"; other abbrev. in text; Meadows numbered within squares: Poultry Road Meadow [6]; Poultry Road Savanna Meadows [7,8]; Beef Barn Meadow [9]; Statistics Lab Savanna [10]; Oak Barren Meadows [11-13]; East *Bidens* Meadow [23]; Fescue Living Mulch Meadow [26]; Building 465 Meadow [27]; Poultry Road West Meadow [31]; Power Line Meadow [33].

Parkway. It is partly lowland with an understory of *Lindera benzoin* and *Clethra alnifolia*. Several years ago the western part of the forest supported many plants of *Cypripedium acaule*, but these were absent in 1997, 1998, and 1999, perhaps due to deer depredations or other factors. A ¼ mile transect in this forest along a tributary of Beaver Dam Creek included the following representative tree species: *Acer rubrum*, *Carpinus caroliniana*, *Cornus florida*, *Liquidambar styraciflua*, *Liriodendron tulipifera*, *Quercus alba*, and *Q. rubra*. Another transect one mile east along the lowland forest border had the same tree species and also *Nyssa sylvatica*, *Prunus serotina*, and *Sassafras albidum*. At this place the roadside was covered with the grass *Microstegium vimineum*, which had also invaded open areas in the lowland forest. At the southwest corner of the Bottomland Research Forest a Washington Metropolitan Area Transit Authority (WMATA) mitigation project has been established. Saplings of bald cypress (*Taxodium distichum*) have been planted there. Thirteen experimental meadows are on the Central Farm. The former Food and Drug Administration complex (FDA) occupies the northcentral part of the Central Farm, and includes a number of large trees of *Quercus montana* and other oak species.

The East Farm (Fig. 4), a large tract (2,481 acres; 1,004 hectares) of which 1,267 acres (513 hectares) are forested, is located east of the Baltimore-Washington Parkway. It includes the abandoned Airport, with several kinds of habitats not occurring elsewhere on BARC. A large pond (Beck Lake) on the East Farm along Soil Conservation Road is shallow and choked with *Nuphar* and *Nymphaea*. South of the pond is a large stand of predominantly coniferous forest, the Coniferous Research Forest. Such forests are more acidic and support populations of *Pinus virginiana*, *P. taeda*, and various oak species with an extensive understory of *Gaylussacia* and *Vaccinium* species. A transect along the border of

this forest recorded the following tree species: *Diospyros virginiana*, *Liquidambar styraciflua*, *Pinus taeda*, *P. virginiana*, *Prunus serotina*, *Quercus marilandica*, and *Q. phellos*. A second forest tract, the Deciduous Research Forest, lies along the eastern part of Beaver Dam Road opposite the NASA Antenna Range. An east-west power line crosses part of the forest, and under it are two open boggy areas about 1/4 mile apart (the west bog is designated Powerline Bog 1, the east bog is Powerline Bog 2) in the headwaters of Beaver Dam Creek. These two bogs and adjacent swamps support a number of species rare or not found elsewhere on the Center (e.g., *Utricularia subulata*, *Sarracenia purpurea*, *Rhynchospora gracilentia*, *R. microcephala*, and *Bartonia paniculata*). Along a ¼ mile transect of the forest in a level area near the powerline the following tree species were present in 1998: *Acer rubrum*, *Diospyros virginiana*, *Liquidambar styraciflua*, *Nyssa sylvatica*, *Pinus virginiana*, *Quercus alba*, *Q. falcata*, *Q. palustris*, *Q. velutina*, and *Sassafras albidum*.

The Wetland Research Forest (East Farm) has two parts. The east part is a *Clethra* shrub swamp that once was much more open and marshy than it is today. A large open area in the western part of the forest was clear-cut and later became a switchgrass (*Panicum virgatum*) field. In the 1980's this land was established as a wetland mitigation project of WMATA, and two ponds occupy this site.

In addition to the Powerline Bogs cited previously, the flora lists certain species collected in former years in the "Beltsville Bog." The application of this name has been uncertain, as several bogs formerly existed in the Beltsville area. Within the Center one application of the name "Beltsville Bog" has been to wet areas in the Wetland Research Forest on the East Farm;

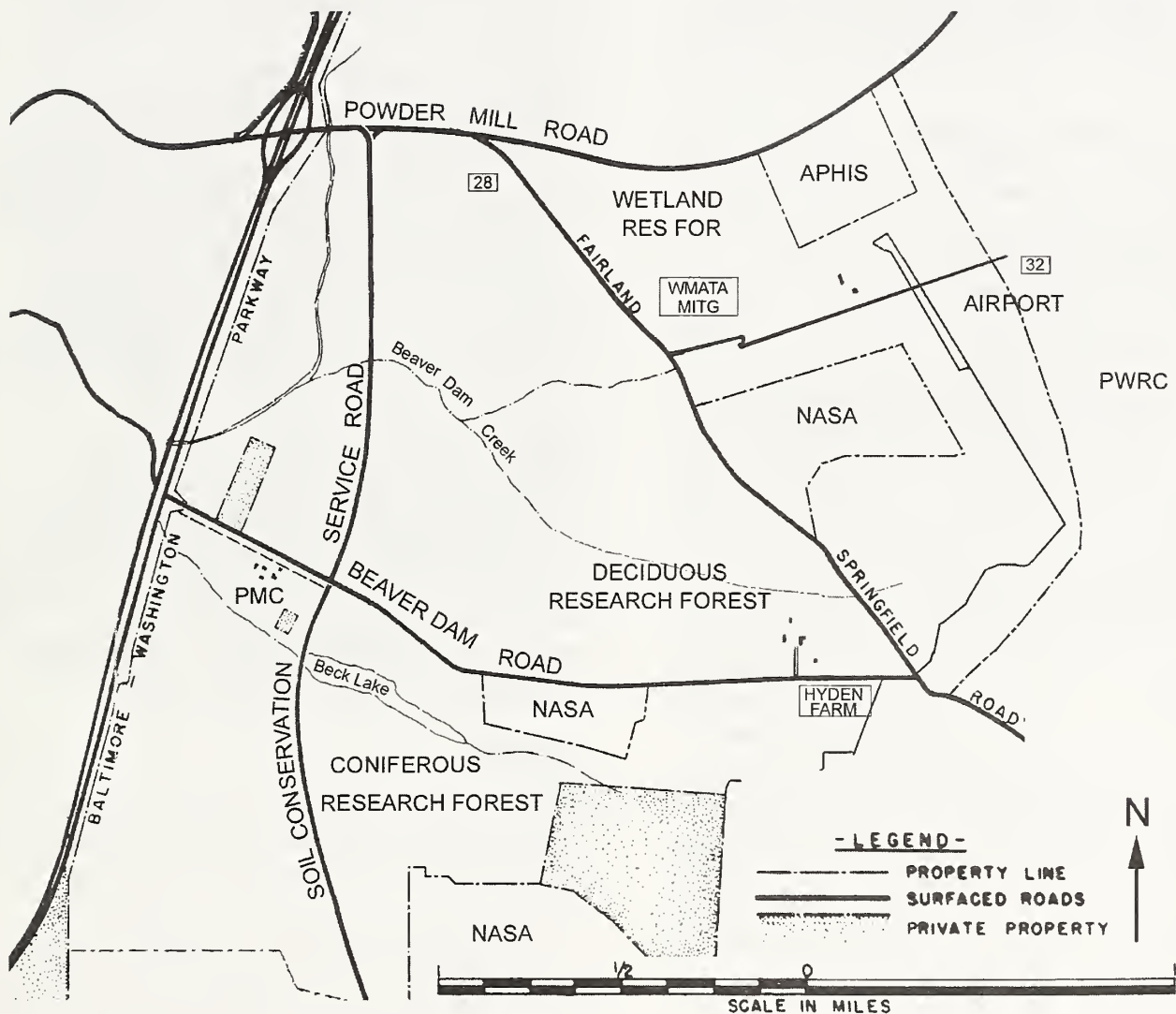


Figure 4. East Farm of Beltsville Agricultural Research Center in Prince George's County, Maryland. APHIS, Animal and Plant Health Inspection Service; HAYDEN FARM, University of Maryland Research Farm; PMC, Plant Materials Center, NRCS ; other abbrev. in text; Meadows numbered within squares: Springfield Road Meadow [28]; Airport Meadow [32].

however, these have undergone sedimentary filling in recent years. In addition, the name has been applied to small sphagnum seepages among the scrub pine forest in the Airport; however, these areas (which formerly had *Bartonia virginica* and *Polygala lutea*) have been nearly destroyed by the effects of various agricultural intrusions.

Experimental meadows

In 1993 a study of natural and artificial meadows was initiated as a cooperative program of the BARC Ecology Committee and the Farm Operations Branch. About 30 meadows were selected for study. Some of these were created *de novo* by killing existing vegetation with herbicides and then tilling. Other horticultural meadows were created by no-till technology. Many of the meadows, both natural and artificial, proved to be quite diverse, having as many as 200 species. In contrast to the horticultural meadows, many of the units were created simply by permitting existing areas to develop into meadows. This proved to be especially effective on acid, sandy soils, where planted lawn grasses had failed. On such soils, many native species had colonized and even become dominant. In the meadows on the north grounds of the National Agricultural Library, communities appeared in which *Schizachyrium scoparium*, *Tridens flavus*, and *Eragrostis spectabilis* were complemented by *Euphorbia corollata* and *Solidago juncea*. Weed invasion of uncultivated fields occurred over long time periods (30–50 years), permitting development of relatively high species richness. More than 500 species appeared in the meadows without having been planted there.

On the Central Farm large fields with scattered oaks were designated as savannas. These meadows simulate the savanna aspect that may have existed at the time of European colonization, when central Maryland was, according to

historians (Marye 1950), burned by Native Americans to form a “Great Barrens.” If this historical analysis is accurate, the land now covered by scattered large oaks (e.g., a 4–5' diameter specimen of *Quercus montana*) may well be a relict of the earlier barrens. This is one explanation for the high plant species diversity in the Poultry Road Oak Savanna. Other diverse meadows include the meadow at Building 465 along Entomology Road and a roadside meadow on the west side of Springfield Road immediately south of Beaver Dam Road. These two meadows, each poorly drained and situated on acid sandy soils, had about 150 plant species. One meadow (Poultry Road Meadow) was interseeded with native species, and now resembles an old-field in the degree of invasion of the pre-existing grass cover. Other than this meadow, old-field communities are scattered and very small at BARC. In the 1970's, a large field along Soil Conservation Road harbored a diverse array of native plants, including some planted by the Soil Conservation Service (now the Natural Resources Conservation Service). The field was a sufficiently rich plant community to support three undescribed insect (leafhopper) species.

Methods

Botanists have collected wild plants on the Center for many years, as reflected in specimens housed in the herbaria of the University of Maryland (MARY) and the Smithsonian Institution (US). More intensive study of the flora began in the 1970's, and was formally initiated in 1997 with the cooperation of the University of Maryland and deposit of collections in their herbarium.

No flora is ever complete, and the varied habitats of BARC continually yield new species records. This annotated flora includes mosses, lichens, and vascular plants. Also included are 32 vascular

species planted in the experimental meadows; these are denoted by asterisks. A few of these meadow species appear to be spreading, while others have died out since being planted. We exclude planted ornamental trees and shrubs, unless they appear to have escaped from cultivation.

The families of vascular plants follow the classification adopted by the USDA, officially designated as follows: Agricultural Research Service (ARS), National Genetic Resources Program, Germplasm Resources Information Network (GRIN), [Online Database] National Germplasm Resources Laboratory, Beltsville, Maryland, URL: www.ars-grin.gov/npgs/tax/taxfam.html (4 December 1998).

Author abbreviations were checked for agreement with Brummit and Powell (1992). Most of the scientific names agree with those in the GRIN database, except as suggested by specialists or reviewers. We recognize that recent research, for example on the Liliaceae, suggests that reclassification is needed. Certain names were also checked in Kartesz (1994) and in Wiersema and León (1999). Latin words such as et al., ex, nom. illeg. are not italicized in the list, following rules suggested in the “CBE Style Manual” (1983) and procedures followed in botanical taxonomic journals such as Brittonia and Novon.

That U.S. Route 1, which bisects BARC, is located a few miles southeast of the Fall Line was noted by Brown and Brown (1984: map page xxii). We believe that the presence at BARC of both Coastal Plain and Piedmont species has made identification problems more difficult, a circumstance that deserves further study. In making identifications of vascular plants we relied heavily on the floras by Brown and Brown (1972, 1984), Gleason and Cronquist (1991), Radford et al. (1968), Voss (1972, 1985), the atlas by Harvill et al. (1992), and other floras and monographic

studies. A study of the vegetation of the neighboring Patuxent Wildlife Research Center (Hotchkiss and Stewart 1979) was helpful as a basis of comparison with the BARC flora.

Species in certain difficult groups were determined as follows: *Panicum* (Michel Lelong); *Carex* (Neil Harriman, Richard Spjut); *Poa* (Rob Soreng); *Eragrostis* (Paul Peterson); *Nymphaea* and *Nuphar* (John Wiersema); *Festuca trachyphylla* (Stephen Darbyshire); and other problematical species (Charles Davis). Lemnaceae were done by Reveal. *Juncus* and Cyperaceae (except *Carex*) were reviewed or identified by Strong. Poaceae were treated by Terrell, except as cited above. Spjut collected and identified all mosses and lichens, but these were not as extensively surveyed as the vascular flora. Specimens are deposited in the following herbaria: MARY, US, or OSH (*Carex*).

Common names were included if a species had a well-established common name, but we attempted to avoid contrived names, whether part of extensive lists or from other sources.

Noteworthy species

Certain weeds deserve special note because of their intrusive and pernicious characteristics. *Microstegium vimineum*, an Asian grass, has become widely distributed in the eastern U. S. (Redman 1995). On BARC it has blanketed roadsides and invaded many areas of forest, e.g., in the Bottomland Research Forest south of Beaver Dam Road. This annual grass produces many individual plants that cover the ground, hence the common name coined here, cover-all grass; it has also been called stilt grass and Nepalese browntop. *Polygonum perforatum*, mile-a-minute weed, is also troublesome (Oliver 1996). It climbs over other vegetation and forms a solid blanket of prickly stems. It invades fairly rich forests wherever it finds open disturbed areas,

such as canopy gaps created by gypsy moth infestations. The long-familiar *Lonicera japonica*, Japanese honeysuckle, persistently invades forests, meadows, and fields.

Two shrubs or small trees of cultivated species are unusually aggressive in producing seedlings: *Viburnum dilatatum*, an attractive ornamental, has become locally frequent on the Central Farm; and *Malus toringo* has invaded meadows and fields.

We have noted the recent absence or reduction in numbers of formerly more frequent species (e.g., *Cypripedium acaule* and *Smilacina racemosa*). We believe that the over-abundance of deer on BARC has been responsible for part of this disappearance. Another factor affecting the vegetation has been gypsy moth depredations, especially in the late 1980's and early 1990's. A number of oaks and other kinds of trees were damaged or killed in this infestation. Certain mosses previously observed in the 1970's by Spjut were judged to be much less abundant in recent years, a circumstance possibly attributable to acid rain.

Certain species are listed as rare in the state in the two Maryland floras (Brown and Brown 1972, 1984). Data on rare species were also provided by the Maryland Department of Natural Resources, and have enabled us to focus on the more noteworthy species occurring on BARC, whether or not they are rare regionally or statewide.

Several species occur in the sphagnum bogs designated previously as Powerline Bogs 1 and 2, located at a tributary of Beaver Dam Creek in the Deciduous Research Forest. These species that grow in this unusual habitat include the following: *Woodwardia virginica*, *Bartonia paniculata*, *Eupatorium pilosum*, *Solidago latissimifolia*, *Rhynchospora microcephala*, *Sarracenia*

purpurea, *Xyris difformis*, and *Utricularia subulata*.

Grass species not recorded from the state by Brown and Brown (1984) include *Echinochloa colona* (a pantropical weed extending its range northward), and the European or Eurasian taxa, *Festuca trachyphylla* and *Poa pratensis* subsp. *angustifolia*. Species occurring naturally only in the meadows around the National Agricultural Library include *Eragrostis hirsuta* and *Euphorbia ipecacuanhae*. Other species in BARC in various habitats include *Cyperus lancastricensis*, *C. iria*, *Ophioglossum pycnostichum*, *Cruciata pedemontana*, *Kalmia angustifolia*, *Krigia dandelion*, *Juncus brachycarpus*, *J. diffusissimus*, *Veratrum viride*, *Viola brittoniana*, and *Chenopodium leptophyllum*.

Summary of taxa

The total number of plant taxa, including species, subspecies, and varieties, found on BARC is 901. Of these, 13 are lichens, 71 mosses, 24 ferns and fern allies, 7 gymnosperms, and 786 angiosperms including 526 dicots and 260 monocots. The total number of vascular plants is 817. In addition, 32 (29 dicots, 3 monocots) angiosperm species (denoted by asterisks) were planted in the meadows and did not occur elsewhere in BARC. Excluding the 32 planted species, the number of species of vascular plants designated as "rare" is 141 or 17% of the total (817). The number of species designated as "rare or infrequent" is 12 or 1.5%. The total of these two categories is 18.5%. Many of these species are Eurasian weeds. Others are native species that may be scarce or rare in Maryland.

Definitions and Symbols

The following terms designate the approximate number of sites where a species occurs. A site is defined here as usually a relatively small area with one to many plants. Sometimes a species occupies

one large area. For example, *Panax trifolius* occurs only in the Indian Creek swamp forest, but it is scattered within that forest; this is described as rare but locally frequent. Designations of frequency are as follows: *Rare*—1 site; *Infrequent*—2–4 sites; *Occasional*—5–approximately 7 sites; *Common*—generally distributed in suitable habitats; and *Abundant* or *Locally Abundant*—many individuals usually occurring at each site. *Common and Abundant*

means that a species is widely distributed and also locally abundant. For some adventive or escaped naturalized species, for aquatic species, and for some lichens and mosses we sometimes omit a frequency estimate and merely list the locations. The term *meadows* refers only to the experimental meadows, whereas the term *fields* has a more general meaning. For some species we refer to both fields and meadows. An asterisk (*) denotes a species planted in the experimental meadows.

List of the flora

Division Ascomycophyta—Lichens

Division Ascomycophyta—Lichens

Cladina subtenuis (Abbayes) Hale & Culb.

Locally abundant: edges of pine forests on sandy soil, East Farm.

Cladonia caespiticia (Pers.) Flörke

Rare: soil bank along Odell Road, Central Farm.

Cladonia chlorophaea (Flörke ex Sommerf.) Spreng.

Occasional: road banks, deciduous forests.

Cladonia cristatella Tuck.

Occasional: road banks, deciduous forests.

Cladonia incrassata Flörke

Infrequent: decaying logs, bottomland forests.

Cladonia ochrochlora Flörke

Occasional: bases of trees, decaying logs.

Cladonia parasitica (Hoffm.) Hoffm.

Occasional: decaying logs in bottomland forests.

Cladonia ramulosa (With.) J. R. Laundon

Rare: rotting log in upland deciduous forest.

Cladonia squamosa (Scop.) Hoffm.

Common: shaded road banks.

Flavoparmelia caperata (L.) Hale

Trunks of old hardwood trees along roads and forest edges, Bottomland Research Forest.

Physcia dimidiata (Arnold) Nyl.

Rare: bark of old tree in ravine forest.

Physcia millegrana Degel.

Rare: bark of old tree among mosses.

Punctelia rudecta (Ach.) Krog

Occasional: trunks of old hardwood trees, often occurring with *Flavoparmelia caperata*, forest margins near ponds and pastures.

Division Bryophyta—Mosses

Amblystegium riparium (Hedw.) Bruch,

Schimp. & W. Gümbel

Wet soil along old dirt road in coniferous forest, Airport.

Amblystegium serpens (Hedw.) Bruch, Schimp. & W. Gümbel

Tree roots in pasture, Poultry Road.

Amblystegium tenax (Hedw.) Jenn.

Sandy soil in coniferous forest off Springfield Road near Airport.

Amblystegium trichopodium (Schultz) C. Hartm.

Old cement foundation in forest north of Poultry Road.

Amblystegium varium (Hedw.) Lindb.

Locally frequent: pavement of deteriorated road in hardwood forest north of Poultry Road.

Anomodon attenuatus (Hedw.) Huebener

Infrequent: near base of old trees in ravine forests.

Atrichum angustatum (Brid.) Bruch, Schimp. & W. Gümbel

Common: forming strips along road and along creek banks in bottomland forests.

Atrichum crispum (James) Sull.

Occasional: wet soil of sphagnum places, shady creek banks, Beaver Dam Creek, Indian Creek, Beck Lake.

Aulacomnium heterostichium (Hedw.) Bruch, Schimp. & W. Gümbel

Old shady road-cut along Springfield Road, East Farm.

Aulacomnium palustre (Hedw.) Schwaegr.

Common: especially with sphagnum in wet pastures, meadows, hardwood forests.

Barbula convoluta Hedw.

Weathered foundation of old building near Building 476, Central Farm.

Barbula fallax Hedw.

Shady soil bank, Biocontrol Road, Central Farm.

Bartramia pomiformis Hedw.

Rare: once collected on shady road cut along Springfield Road, East Farm, now a developed area.

Division Bryophyta—Mosses

Brachythecium laetum (Brid.) Bruch, Schimp. & W. Gümbel

Occasional: pastures with scattered trees or carpeting old paved roads.

Brotherella recurvans (Michx.) Fleisch.

Bases of old trees, Beck Lake, Airport.

Bryhnia novae-angliae (Sull. & Lesq. ex Sull.)

Grout

Infrequent: branches or debris in dense shade along creeks of bottomland forest, Indian Creek.

Bryoandersonia illecebra (Hedw.) H. Rob.

Occasional: in pastures partially shaded by trees and road banks in hardwood forest.

Bryum argenteum Hedw.

shaded soil of road-cut, edges of parking lots, Building 011A, North Farm; Odell Road, Central Farm.

Bryum caespiticum Hedw.

Rare: wet pasture near margin of pine forest, Powder Mill Road.

Callicladium haldanianum (Grev.) Crum

Wet tree bases, rotting wood, bare soil, bottomland forest, Indian Creek.

Ceratodon purpureus Hedw.

Common: shaded bare soil near buildings, partially shaded soil of pastures, cracks of sidewalks, carpeting old paved roads.

Clasmatodon parvulus (Hampe) Hook.

Old foundation of building.

Cratoneuron filicinum (Hedw.) Spruce

Rare: densely shaded soil along Indian Creek in bottomland forest, Edmonston Road.

Dicranella heteromalla (Hedw.) Schimp.

Once common on BARC as a pioneer species along roadbanks and mounds near forest margins; occasionally seen since 1987.

Dicranum condensatum Hedw.

Rare: understory of hardwood forest near junction of Odell and Springfield roads, not seen since 1993.

Dicranum flagellare Hedw.

Occasional: old rotting wood, base of trees, in hardwood forests along streams or about bogs.

Dicranum flagellare Hedw var. **minutissimum**

Grout

Occasional: base of trees in wet hardwood forests.

Dicranum scoparium Hedw.

Formerly common, now occasional: Odell and Springfield Roads near forest margins.

Ditrichum lineare (Sw.) Lindb.

Rare: soil of cut-over forest along Poultry Road.

Entodon seductrix (Hedw.) Müll. Hal.

Occasional: partially shaded rocks and old concrete foundations; carpeting tar roofs of buildings overgrown by vegetation.

Eurhynchium pulchellum (Hedw.) Jenn.

Shaded soil of road banks, Odell Road, Central Farm.

Grimmia apocarpa Hedw.

Shaded pavement of road in hardwood forest north of Poultry Road.

Haplocladium microphyllum (Hedw.) Broth.

Wet tree bases, bottomland forest, South Farm; Indian Creek.

Haplocladium virginianum (Brid.) Broth.

Rare: wet rotting log, bottomland forest, South Farm.

Hedwigia ciliata (Hedw.) P. Beauv.

Occasional: roof tops, on soil near edges of pavements of parking lots.

Helodium paludosum (Sull.) Austin

Locally abundant: wet depressions in pasture among grasses.

Hypnum curvifolium Hedw.

Rare: moist tree bases in dense shade, hardwood forest, Odell Road, Central Farm.

Hypnum imponens Hedw.

Occasional: rotting logs, mostly in older growth bottomland hardwood forests; Airport; Indian Creek; Beck Lake.

Hypnum lindbergii Mitt.

Wet shady soil, bottomland forest, Indian Creek.

Hypnum pallescens (Hedw.) P. Beauv.

Rare: rotting logs in heath understory of hardwood forest, Central Farm.

List of the flora

Division Bryophyta—Mosses

Isopterygium elegans (Sw.) Mitt.

Wet shaded soil in mixed conifer hardwood forest, Beck Lake, not collected since 1983.

Isopterygium tenerum (Sw.) Mitt.

Wet soil, Beck Lake.

Leskea gracilescens Hedw.

Old partially shaded concrete foundations and pavement, Poultry Road.

Leskea polycarpa Hedw.

Occasional: tree roots in partially shaded pasture, Poultry Road.

Leucobryum albidum (Brid.) Lindb.

Occasional: tree bases, soil banks, margins of old growth forests.

Leucobryum glaucum (Hedw.) Ångstr. ex E. M. Fr.

Common: near margins of old growth forests of pine and hardwoods.

Plagiomnium cuspidatum (Hedw.) T. J. Kop.

Formerly abundant along stream banks in forests, now infrequent.

Plagiothecium cavifolium (Brid.) Z. Iwats

Formerly on soil of stream banks in forest off Soil Conservation Road, East Farm; not collected since 1976.

Platygyrium repens (Brid.) Bruch, Schimp. & W. Gumbel

Old rotting wood in wet bottomland forests, Beaver Dam Creek; Indian Creek.

Pleuridium subulatum (Hedw.) Rabenh.

Locally frequent: soil of old shady road and ant mounds in older growth hardwood forest, Odell Road, Central Farm.

× ***Pleuriditrichum marylandicum*** A. L.

Andrews & F. J. Herm.

One collection from South Farm.

Pogonatum pensilvanicum (Hedw.) P. Beauv.

Formerly locally frequent in road cuts in hardwood forest, Odell Road; not seen since 1985.

Pohlia nutans (Hedw.) Lindb.

Bare soil near tree bases and on road cuts.

Polytrichastrum ohioense (Renauld & Cardot) G. L. Smith

Common: partially shaded soil in mixed hardwood and pine forests.

Polytrichum commune Hedw.

Common: shaded roadcuts, margins of forests, boggy places, pastures, and meadows.

Polytrichum juniperinum Hedw.

Rare: banks along Powder Mill Road, East Farm.

Polytrichum piliferum Hedw.

Infrequent: open siliceous soils of powerlines.

Pylaisiella polyantha (Hedw.) Grout

Occasional: on trunks of old trees in ravines.

Sematophyllum adnatum (Michx.) E. Britton

Infrequent: wet-decaying branches near ponds or streams in bottomland forests, Edmonston Road, Linkage Farm.

Sematophyllum demissum (Wils.) Mitt.

Rare: wet tree root near Beck Lake.

Sphagnum capillifolium (Ehrenb.) Hedw.

Wet seepages in mixed pine and hardwood forests, Odell Road; Airport.

Sphagnum compactum DC. ex Lam. & DC.

Beck Lake; Airport.

Sphagnum imbricatum Hornsch. ex J. L. Russell

Margins of Beck Lake.

Sphagnum palustre L.

Seepages along powerline near Beck Lake.

Sphagnum recurvum P. Beauv.

Shores of Beck Lake.

Sphagnum secundum Nees ex Sturm

Wet stream bank in forest, Odell Road, Central Farm.

Sphagnum subsecundum Nees ex Sturm

Seepage along powerline track near Beck Lake; Airport, occurring with *Sphagnum palustre*.

Steerecleus serrulatus (Hedw.) H. Rob.

Occasional: tree roots, old paved roads, concrete foundations, and hardwood forests.

Thuidium allenii Austin

Rare: wet soil bordering pond in forest, below Building 476, Central Farm.

List of the flora
Division Equisetophyta—Horsetails
Equisetaceae

Thuidium erectum Duby

T. delicatulum (Hedw.) Bruch, Schimp. & W.
Gümbel, nom illeg.

Formerly common along stream banks in
hardwood forest, largely vanished since 1987;

still frequent in wet pastures and on bases of
trees in ravines.

Tortella humilis (Hedw.) Jenn.

Tree roots in pasture, Poultry Road.

Division Lycopodiophyta—Club-mosses and spike-mosses

Lycopodiaceae

Diphasiastrum digitatum (Dill. ex A. Braun)

Holub—fan club-moss.

Lycopodium digitatum Dill. ex A. Braun

L. complanatum var. *flabelliforme* Fernald

L. flabelliforme (Fernald) Blanch.

Common and abundant: forming continuous
stands over small areas of forest.

Lycopodiella appressa (Chapman) Cranfill—
appressed bog club-moss.

Lycopodium inundatum L. var. *bigelovii* Tuck.

Infrequent: Beck Lake shore; swamp adjacent to
Airport.

Lycopodium clavatum L.—running club-moss.

Infrequent to occasional: Coniferous and
Deciduous Research Forests; Entomology
Road.

Lycopodium obscurum L.—tree club-moss.

Common: forests, occasionally forming
continuous stands.

Selaginellaceae

Selaginella apoda (L.) Spring—meadow spike-
moss.

Rare: along stream in pine forest, Airport (in or
near the Patuxent Wildlife Research Center).

Division Equisetophyta—Horsetails

Equisetaceae

Equisetum arvense L.—field horsetail.

Infrequent: Beaver Dam Creek swamp; around
greenhouses and outbuildings, Entomology
Road.

List of the flora
Division Polypodiophyta—Ferns
Aspleniaceae

Division Polypodiophyta—Ferns

Aspleniaceae

Asplenium platyneuron (L.) Britton, Sterns, &
Poggenb. var. **platyneuron**—ebony
spleenwort.
Infrequent: forests of Central and East Farms.

Blechnaceae

Woodwardia areolata (L.) T. Moore—netted
chain fern.
Occasional: moist forests and swampy areas.

Woodwardia virginica (L.) Sm.—Virginia chain
fern.
Rare: Powerline Bog 2, East Farm.

Dennstaedtiaceae

Dennstaedtia punctilobula (Michx.) T. Moore—
hay-scented fern.
Infrequent: open slope, South Farm; forests in
Central and East Farms.

Pteridium aquilinum (L.) Kuhn—bracken fern.
Occasional: forest edges and under powerlines.

Dryopteridaceae

Dryopteris carthusiana (Vill.) H.P. Fuchs—
spinulose wood fern.
D. spinulosa (O. F. Muell.) Watt
Occasional: moist deciduous forests, Central and
East Farms.
Dryopteris cristata (L.) A. Gray—crested wood
fern.
Infrequent: deciduous forests along Entomology
Road and Indian Creek swamp forest.

Dryopteris intermedia (Muhl. ex Willd.) A.
Gray—intermediate wood fern.
Occasional: deciduous forests, Central and East
Farms.
Polystichum acrostichoides (Michx.) Schott—
Christmas fern.
Common: moist forests.

Ophioglossaceae

Botrychium dissectum Spreng.—lace-frond
grape fern.
Occasional: open forests.

Botrychium virginianum (L.) Sw.—rattlesnake
fern.
Occasional: open forests.

List of the flora
Division Pinophyta—Gymnosperms
Pinaceae

Ophioglossum pycnostichum (Fernald) Å. Löve
& D. Löve —southeastern adder's-tongue.
Rare: local in deciduous forest at west end of
Bottomland Research Forest near Beaver Dam
Road.

Osmundaceae

Osmunda cinnamomea L.—cinnamon fern.
Occasional: moist forests and swamps.

Osmunda regalis L.—royal fern.
Occasional: wet forests and swamps.

Thelypteridaceae

Thelypteris noveboracensis (L.) Nieuwl.—New
York fern.
Dryopteris noveboracensis (L.) A. Gray
Common: moist forests.

Thelypteris palustris Schott var. **pubescens** (G.
Lawson) Fernald—marsh fern.
Dryopteris thelypteris (L.) A. Gray
Infrequent: forest, Beck Lake.

Woodsiaceae

Athyrium filix-femina (L.) Roth ex Mert. subsp.
asplenioides (Michx.) Hultén—southern lady
fern.
Occasional: rich forests.

Onoclea sensibilis L.—sensitive fern.
Common: forest edges, thickets.

Division Pinophyta—Gymnosperms

Cupressaceae

Juniperus virginiana L.—red cedar.
Common: roadsides, meadows, fields; seedlings
frequently invasive.

Pinaceae

Pinus echinata Mill.—yellow pine.
Rare: Coniferous Research Forest.
Pinus rigida Mill.—pitch pine.
Rare: Coniferous Research Forest.

Pinus taeda L.—loblolly pine.
Common: mixed forest.

List of the flora

Division Pinophyta—Gymnosperms

Pinaceae

Pinus virginiana Mill.—Virginia pine.

Common and abundant: forests; seedlings occur in early successional habitats.

Tsuga canadensis (L.) Carrière—hemlock.

Small hill in the southeastern corner of the Bottomland Research Forest, apparently escaped from cultivation.

Taxodiaceae

Taxodium distichum (L.) Rich.—bald cypress.

Planted: Research Road Mitigation Project near Beck Lake; old planting downstream from Beck Lake.

List of the flora

Class Magnoliopsida—Dicotyledons

Aceraceae

Division Magnoliophyta—Angiosperms

Class Magnoliopsida—Dicotyledons

Aceraceae

Acer negundo L.—box elder.

Occasional: lowland forests, edges, and as seedlings in meadows.

Acer rubrum L.—red maple.

Common and abundant: often dominant in riparian forests; invading meadows as seedlings.

Acer saccharinum L.—silver maple.

Infrequent: along stream, South Farm; around building, North Dairy Road; forest border, Central Farm.

Adoxaceae

Sambucus canadensis L.—common elderberry.

Occasional: forest margins, moist thickets.

Viburnum dentatum L. var. **dentatum**—arrow-wood.

Infrequent: lowland forests, South Farm; Bottomland Research Forest.

Viburnum dentatum L. var. **lucidum** Aiton—arrow-wood.

V. recognitum Fernald

Occasional: forests.

Viburnum dilatatum Thunb.—linden arrow-wood.

Infrequent: a cultivated species from China and Japan producing seedlings and locally frequent

in the forest by the pond at the end of Entomology Road; spreading southwestward in the forest along Entomology Road. One small tree also found along Beaver Dam Road, Bottomland Research Forest.

Viburnum lentago L.—nannyberry.

Rare: border of forest, Research Road, Central Farm. Identification tentative.

Viburnum nudum L.—possum-haw, withe-rod.

Infrequent: Indian Creek swamp forest; powerline swamps in the Deciduous Research Forest.

Viburnum prunifolium L.—black haw.

Occasional in forests.

Amaranthaceae

Amaranthus albus L.—tumble-weed.

Infrequent: weedy in cultivated and waste places.

Amaranthus blitum L.—purple amaranthus.

A. lividus L.

Infrequent: North Farm, Sellman Road meadow; weed plot.

Amaranthus hybridus L.—smooth pigweed.

Common: weedy in cultivated fields.

Amaranthus retroflexus L.—redroot pigweed.

Occasional: weedy in cultivated fields.

Amaranthus spinosus L.—spiny amaranth.

Occasional: weedy in fields and waste places.

List of the flora
Class Magnoliopsida—Dicotyledons
Apocynaceae

Anacardiaceae

Rhus copallina L.—dwarf sumac.

Common: forest edges, roadsides, open places.

Rhus glabra L.—smooth sumac.

Occasional: forest edges, stream banks.

Rhus typhina L.—staghorn sumac.

R. hirta (L.) Sudw., nom. rej. prop.

Occasional: forest edges, stream banks.

Toxicodendron radicans (L.) Kuntze—poison ivy.

Rhus radicans L.

Common and abundant: forests, meadows, and roadsides.

Toxicodendron vernix (L.) Kuntze—poison sumac.

Rhus vernix L.

Infrequent: Indian Creek swamp forest; Wetland Research Forest; Powerline Bog 2.

Apiaceae

Cicuta maculata L.—water-hemlock.

Infrequent: Indian Creek swamp forest and other wet places.

Cryptotaenia canadensis (L.) DC.—wild chervil.

Infrequent: lowlands, thickets; Indian Creek; Beaver Dam Creek at Soil Conservation Road, East Farm.

Daucus carota L.—Queen Anne's lace.

Occasional: fields, meadows and roadsides.

Hydrocotyle americana L.—American water pennywort.

Infrequent: Central Farm: lowland forests along branch of Beaver Dam Creek; forest at end of Entomology Road.

Osmorhiza longistylis (Torr.) DC.—sweet cicely.
Formerly present in forests; not seen in 1997–1999.

Oxypolis rigidior (L.) Raf.—stiff cowbane.

Rare: powerline swamp, Deciduous Research Forest.

Sanicula canadensis L.—black snakeroot.

Occasional: Indian Creek swamp forest; oak forest at South Farm; Beck Lake area.

Apocynaceae

Apocynum cannabinum L.—hemp dogbane.

Common: fields and meadows.

Vinca minor L.—common periwinkle.

Infrequent: escape from cultivation.

List of the flora
Class Magnoliopsida—Dicotyledons
Aquifoliaceae

Aquifoliaceae

Ilex laevigata (Pursh) A. Gray—smooth winterberry.
Rare: *E. H. Walker 1341*, 14 Sep 1930, Beltsville Bog (MARY).

Ilex opaca Aiton—American holly.
Common: forest understory.
Ilex verticillata (L.) A. Gray—winterberry.
Infrequent: lowland forests, South Farm;
Deciduous and Coniferous Research Forests.

Araliaceae

Aralia spinosa L.—Hercules'-club.
Rare: oak forest, South Farm.

Hedera helix L.—English ivy.
Occasional escape from cultivation.

Panax trifolius L.—dwarf ginseng.
Rare but locally frequent in Indian Creek swamp forest.

Asclepiadaceae

Asclepias incarnata L.—swamp milkweed.
A. incarnata L. var. *incarnata*
A. incarnata L. var. *pulchra* (Ehrh. ex Willd.) Pers.

Occasional: fields, meadows, and ditches;
planted in certain meadows.

Asclepias syriaca L.—common milkweed.
Common: roadsides, fields, and meadows.

Asclepias tuberosa L.—butterfly weed.
Infrequent to occasional: fields and meadows; a native species, but also planted in meadows on North and Central Farms.

Asclepias viridiflora Raf.—green milkweed.
Infrequent: meadows near National Agricultural Library and elsewhere.

Asteraceae

***Achillea filipendulina** Lam.—golden yarrow, fern-leaf yarrow.
Planted in meadows.

Achillea millefolium L.—yarrow.

Common: fields, meadows, and edges.

Ambrosia artemisiifolia L.—common ragweed.
Common: weedy in cultivated fields, meadows, and waste places.

Ambrosia trifida L.—great ragweed.

Occasional: weedy places in lowlands.

Antennaria neglecta Greene var. *neodioica* (Greene) Cronquist—field pussy-toes.
Occasional: meadows and fields.

Antennaria plantaginifolia (L.) Richardson (sens. lat.)—plantain-leaved pussy-toes.
Common: roadsides, fields, meadows and lawns.

Anthemis arvensis L.—corn chamomile.

Infrequent: cornfields and waste places; locally abundant in 1998 at South Farm.

Anthemis cotula L.—dog-fennel, stinking chamomile.

Occasional: cornfields and waste places.

Arctium minus (Hill) Bernh.—common burdock.
Occasional: cultivated fields, meadows, and waste places.

List of the flora
Class Magnoliopsida—Dicotyledons
Asteraceae

- Artemisia annua** L.—annual wormwood.
Rare: roadside weed, Central Farm.
- Artemisia vulgaris** L.—common mugwort, wormwood.
Common: cultivated fields and waste places.
- Aster:**
Synonyms provided by Robinson represent a more up-to-date taxonomic view, following Nesom (1994).
- Aster lanceolatus** Willd. subsp. **lanceolatus**—tall white aster.
Aster simplex Willd.
Symphyotrichum lanceolatum (Willd.) Nesom
Rare: Indian Creek swamp forest.
- Aster lateriflorus** (L.) Britton—calico aster.
Symphyotrichum lateriflorum (L.) Nesom
Infrequent: Indian Creek swamp forest; forest, South Farm; Poultry Road Unseeded Meadow.
- *Aster novae-angliae** L.—New England aster.
Symphyotrichum novae-angliae (L.) Nesom
Planted: meadows on North and Central Farms.
- Aster patens** Aiton var. **patens**—late purple aster.
Symphyotrichum patens (Aiton) Nesom
Meadows near National Agricultural Library.
- Aster pilosus** Willd. var. **pilosus**—white oldfield aster.
Symphyotrichum pilosum (Willd.) Nesom
Common: meadows and fallow fields; planted in meadows on North and Central Farms.
- Aster puniceus** L.
Symphyotrichum puniceum (L.) Å. Löve & D. Löve
Rare: ditch at South Farm.
- Aster racemosus** Elliott—small-headed aster.
A. vimineus Lam.
Symphyotrichum racemosum (Elliott) Nesom
Common: forest edges, roadsides, meadows, fields.
- Bidens bipinnata** L.—Spanish needles.
Occasional: thickets, open places.
- Bidens discoidea** (Torr. & A. Gray) Britton—small beggars-ticks.
Rare: shore of Beck Lake.
- Bidens frondosa** L.—common beggars-ticks.
Occasional: weedy places, swamps.
- Bidens polylepis** S.F. Blake—tickseed beggars-ticks.
Common and abundant: forest edges, meadows, ditches and roadsides, occupying both moist and dry habitats. Also planted and proved attractive in meadows.
- Bidens tripartita** L. (sens. Brown and Brown, Radford et al.)—three-lobed beggars-ticks.
B. comosa (A. Gray) Wiegand
B. connata Muhl. ex Willd.
Infrequent: swamp along Beaver Dam Creek; Beck Lake shore.
- Carduus nutans** L.—musk thistle.
Infrequent: fields at Airport; Poultry Road Infield Meadow.
- *Centaurea cyanus** L.—garden cornflower.
Planted: National Agricultural Library meadows and other meadows on Central Farm.
- Centaurea maculosa** Lam.—spotted knapweed.
Occasional: weedy places, roadsides; locally abundant at Airport.
- Chondrilla juncea** L.—skeleton-weed, gum succory.
Meadows near National Agricultural Library and North Farm.
- Chrysopsis mariana** (L.) Elliott—Maryland golden aster.
Occasional: roadsides, fields and meadows.
- Cichorium intybus** L.—chicory.
Common: roadsides, fields, and occasional in meadows.
- Cirsium arvense** (L.) Scop.—Canada thistle.
Occasional: noxious weed in cultivated fields, meadows, and roadsides, forming large stands.
- Cirsium discolor** (Muhl. ex Willd.) Spreng.—field thistle.
Occasional: fields and meadows.

List of the flora

Class Magnoliopsida—Dicotyledons

Asteraceae

Cirsium vulgare (Savi) Ten.—Bull thistle.

Occasional: fields and meadows.

Conoclinium coelestinum (L.) DC.—blue mistflower.

Eupatorium coelestinum L.

Occasional: meadows and ditches.

Conyza canadensis (L.) Cronquist—horseweed.

Common: weedy in cultivated and fallow fields and meadows.

***Coreopsis lanceolata** L.—lance-leaved coreopsis, longstalk tickseed.

Planted: meadows of West, Central, and Linkage Farms, where it is increasing.

***Coreopsis tinctoria** Nutt.—golden tickseed.

Planted: scattered meadows.

Coreopsis verticillata L.—whorled tickseed.

Infrequent: oak forest, South Farm; Deciduous Research Forest.

***Cosmos bipinnatus** Cav.—cosmos.

Planted in certain meadows.

***Echinacea purpurea** (L.) Moench—purple coneflower.

Planted: meadows on North, Linkage, Central, and East Farms.

Eclipta prostrata (L.) L.—yerba-de-tajo.

E. alba (L.) Hassk.

Occasional: weedy in disturbed soil.

Elephantopus carolinianus Raeusch.—leafy elephant's foot.

Occasional: Poultry Road meadows and oak savanna; *Eragrostis* Hill Meadow near National Agricultural Library; other meadows.

Erechtites hieraciifolia (L.) Raf. ex DC.—fireweed.

Common: weedy in cultivated fields and meadows.

Erigeron annuus (L.) Pers.—annual fleabane, whitetop.

Common: weedy in cultivated and fallow fields and meadows.

Erigeron philadelphicus L.—Philadelphia fleabane.

Occasional: cultivated and fallow fields and meadows.

Erigeron strigosus Muhl. ex Willd.—whitetop.

Common: weedy in cultivated and fallow fields and meadows.

Eupatorium altissimum L.

Infrequent: roadside, Powder Mill and Soil Conservation Service Roads, East Farm.

Eupatorium dubium Willd. ex Poir.—three-nerved joe-pye-weed.

Infrequent: ditch at South Farm; powerline bogs, Deciduous Research Forest.

Eupatorium fistulosum Barratt—hollow-stemmed joe-pye-weed.

Infrequent to occasional: Entomology Road; Beck Lake; North Farm along creek.

Eupatorium hyssopifolium L.—hyssop-leaved thoroughwort.

Common: along roadsides, increasing in meadows and waste places.

Eupatorium maculatum L.—spotted joe-pye-weed.

Rare: Indian Creek swamp forest.

Eupatorium perfoliatum L.—boneset.

Occasional: meadows and moist places.

Eupatorium pilosum Walter—vervain thoroughwort.

Rare: powerline bogs, Deciduous Research Forest.

Eupatorium purpureum L.—sweet-scented joe-pye-weed.

Occasional: meadows and woodland borders.

Eupatorium rotundifolium L.—round-leaved thoroughwort.

Infrequent: forest, South Farm; Springfield Road Meadow, East Farm.

Eupatorium serotinum Michx.—late-flowering thoroughwort.

Common: meadows and waste places; planted in Poultry Road meadows.

List of the flora
Class Magnoliopsida—Dicotyledons
Asteraceae

Euthamia graminifolia (L.) Nutt.—flat-topped goldenrod.

Solidago graminifolia (L.) Salisb.

Occasional: powerlines and meadows on North and Central Farms.

***Gaillardia pulchella** Foug.—blanket-flower.

Planted: meadows on Linkage and Central Farms.

Galinsoga parviflora Cav.—galinsoga.

Occasional: weedy in disturbed soil.

Gnaphalium obtusifolium L.—fragrant cudweed.

Occasional: roadsides, meadows, and fields; planted in meadows on North and Central Farms.

Gnaphalium uliginosum L.—low cudweed.

Infrequent: Beaver Dam powerline, and elsewhere on Central Farm.

Helianthus tuberosus L.—Jerusalem artichoke.

Infrequent: two sites along Paint Branch Creek, North Farm.

***Heterotheca subaxillaris** (Lam.) Britton & Rusby—camphor-weed.

Planted: National Agricultural Library meadows.

Hieracium caespitosum Dumort.—king devil.

H. pratense Tausch

Occasional: open places.

Hieracium gronovii L.—hawkweed.

Infrequent: meadows and fields.

Hieracium venosum L.—rattlesnake-weed, poor robin's plantain.

Infrequent: Bottomland Research Forest; oak forest, South Farm.

Hypochaeris radicata L.—cat's-ear.

Common: weedy in lawns and meadows.

Krigia dandelion (L.) Nutt.—potato dandelion.

Rare or infrequent: grassy area along Biocontrol Road near Beaver Dam Road, Central Farm.

Krigia virginica (L.) Willd.—dwarf dandelion.

Occasional: meadows, forest borders.

Lactuca canadensis L.—tall lettuce.

Infrequent: meadows and open places; Springfield Road Meadow, East Farm.

Lactuca floridana (L.) Gaertn.—Florida blue lettuce.

Infrequent: lowland thickets, bottomlands.

Lactuca saligna L.—willow-leaf lettuce.

Infrequent: weedy around buildings, Central Farm; in pavements, Entomology Road.

Lactuca serriola L.—prickly lettuce.

Lactuca scariola L.

Common: obnoxious weed along roadsides; has recently invaded meadows on North Farm.

***Leucanthemum maximum** (Ramond) DC.—Shasta daisy.

Chrysanthemum maximum Ramond

Planted: meadows on North and Central Farms, flowering abundantly.

Leucanthemum vulgare Lam.—oxeye daisy.

Chrysanthemum leucanthemum L.

Common: fields and meadows.

Liatris graminifolia (Walter) Willd.—grass-leaved blazing star.

Infrequent: roadside, Biocontrol Road, Central Farm; Deciduous Research Forest powerline; Springfield Road; planted in meadows on North Farm.

***Liatris pycnostachya** Michx.—thick-spiked blazing star.

Planted: meadows on North Farm and National Agricultural Library.

Matricaria matricarioides (Less.) Porter—pineapple weed.

Occasional: disturbed sites on Central Farm.

Mikania scandens (L.) Willd.—climbing hempvine.

Infrequent: Beaver Dam Creek swamp and Bottomland Research Forest.

Prenanthes serpentaria Pursh—lion's foot, gall of the earth.

Infrequent: Poultry Road savanna; Odell Road, Central Farm.

List of the flora

Class Magnoliopsida—Dicotyledons

Asteraceae

***Ratibida pinnata** (Vent.) Barnhart—globular coneflower.

Planted: National Agricultural Library meadow.

Rudbeckia hirta L. (sens. lat.)—black-eyed susan.

Occasional: roadsides and open places; planted in meadows on North, Central, and Linkage Farms.

Rudbeckia laciniata L.—wild golden glow.

Rare: along Little Paint Branch Creek, North Farm.

Senecio anonymus A.W. Wood—Small's ragwort.

S. smallii Britton

Infrequent: Springfield Road meadow, East Farm; Poultry Road oak savanna, Central Farm.

Senecio vulgaris L.—common groundsel.

Occasional: cultivated fields and waste places.

Solidago caesia L.—axillary goldenrod.

Infrequent: Poultry Road Unseeded Meadow; oak forest, South Farm; border of forests along Beaver Dam Road near west bridge.

Solidago canadensis L. var. *scabra* (Muhl.) Torr. & A. Gray—tall goldenrod.

S. altissima L.

Occasional to common: roadsides, meadows, fields.

Solidago erecta Pursh

Rare: forest border, South Farm.

Solidago juncea Aiton—early goldenrod.

Occasional: fields and meadows.

Solidago latissimifolia Mill.

S. elliotii Torr. & A. Gray

Rare: powerline bogs, Deciduous Research Forest.

Solidago nemoralis Aiton—gray goldenrod.

Occasional: fields, meadows.

Solidago puberula Nutt.—dusty goldenrod.

Occasional: Powerline Meadow; Oak Barren; Center Meadow; Deciduous Research Forest; Biocontrol Road; Airport.

Solidago rugosa Mill. (sens. lat.)—wrinkle-leaved goldenrod.

Occasional: fields and meadows; also planted in Poultry Road meadows; variable, some plants resembling subsp. *aspera* (Aiton) Cronquist.

Sonchus asper (L.) Hill—spiny-leaved sow-thistle.

Occasional: fallow fields and meadows.

Taraxacum officinale Weber ex F.H. Wigg.—dandelion.

Common and abundant weed: roadsides, fields and lawns.

Tragopogon dubius Scop.—fistulous goat's-beard.

T. major Jacq.

Infrequent: Airport meadow and other meadows.

Tragopogon pratensis L.—yellow or showy goat's-beard.

Rare: Fescue Meadow near National Agricultural Library.

Tussilago farfara L.—colt's-foot.

Common: along moist roadsides.

Verbesina alternifolia (L.) Britton ex Kearney—wingstem.

Rare: along Paint Branch Creek, South Farm.

Vernonia noveboracensis (L.) Michx.—New York ironweed.

Occasional: meadows and fields.

Xanthium strumarium L.—cocklebur.

Occasional: roadsides, cultivated and fallow fields.

Youngia japonica (L.) DC.

Crepis japonica (L.) Benth.

Rare: roadside, east end of Beaver Dam Road, Central Farm.

Balsaminaceae

Impatiens capensis Meerb.—jewelweed.

I. biflora Walter

Occasional: moist or wet lowlands.

Berberidaceae

Berberis thunbergii DC.—Japanese barberry.

Occasional: forests and their borders as an escape from cultivation.

Podophyllum peltatum L.—may-apple.

Occasional: deciduous forests and thickets.

Betulaceae

Alnus serrulata (Aiton) Willd.—alder.

Rare or infrequent: riparian habitats, Indian Creek swamp forest.

Betula nigra L.—river birch.

Common: riparian habitats and lowland forests.

Carpinus caroliniana Walter—American hornbeam.

Common: forests.

Corylus americana Marshall—American hazelnut.

Infrequent: lowland forests, Indian Creek swamp forest; Entomology Road forest.

Bignoniaceae

Campsis radicans (L.) Seem. ex Bureau—trumpet creeper.

Common: weedy places, fencerows, fields, meadows.

Catalpa bignonioides Walter—southern catalpa.

Occasional: forest edges.

Boraginaceae

Buglossoides arvensis (L.) I. M. Johnst.—corn gromwell.

Lithospermum arvense L.

Occasional: roadsides and cultivated fields.

Myosotis arvensis (L.) Hill—mouse-ear scorpion-grass.

Rare: grassy place, junction of Beaver Dam Road and Research Road, Central Farm.

Myosotis stricta Link ex Roem. & Schult.—blue scorpion-grass.

M. micrantha non Pall. ex Lehm.

Infrequent but locally abundant: cornfield, South Farm; edge of fields in Central Farm.

***Myosotis sylvatica** Ehrh. ex Hoffm.—woodland forget-me-not.

Planted: National Agricultural Library meadow.

List of the flora

Class Magnoliopsida—Dicotyledons

Brassicaceae

Brassicaceae

Alliaria petiolata (M. Bieb.) Cavara & Grande—garlic mustard.

A. officinalis Andr. ex M. Bieb.

Common: roadsides and open forests.

Arabidopsis thaliana (L.) Heynh.—mouse-ear cress.

Occasional: cultivated fields.

Barbarea verna (Mill.) Asch.—early wintercress.

Cornfield on South Farm; roadside, East Farm; may occur more frequently as there is a close resemblance to the following species.

Barbarea vulgaris R. Br.—wintercress, yellow rocket.

Common and abundant: weedy in cultivated fields and meadows.

Capsella bursa-pastoris (L.) Medik.—shepherd's purse.

Common weed in cultivated fields and disturbed places.

Cardamine concatenata (Michx.) Sw.—cut-leaved toothwort.

Dentaria laciniata Muhl. ex Willd.

Infrequent to occasional: Deciduous and

Bottomland Research Forests; Entomology Road and Poultry Road forests.

Cardamine hirsuta L.—hairy bitter cress.

Common: weedy in cultivated fields, lawns, meadows, disturbed soil.

Draba verna L.—whitlow-grass.

Common: weed in lawns and disturbed places.

Eruca sativa Mill.—garden rocket.

Upper Meadow of Building 011A, North Farm.

Erysimum asperum (Nutt.) DC.—plains wallflower.

Rare: edge of Farm Operations Building; parking lot near Log Lodge, Central Farm.

***Erysimum marshallii** (Hemfr.) Bois

Planted in meadows; received as *Cheiranthus allionii*, a confused name.

***Hesperis matronalis** L.—dame's rocket.

Planted: meadows near National Agricultural Library.

Lepidium campestre (L.) R. Br.—field cress.

Occasional: weedy places and edges of lawns.

Lepidium virginicum L.—poor-man's peppergrass.

Common: cornfields, meadows and forest edges.

Rorippa palustris (L.) Besser subsp. **palustris**—common yellow-cress.

R. islandica (Oeder) Borbas, misapplied.

Occasional: weedy in meadows, fields and along roadsides.

Sisymbrium officinale (L.) Scop.—hedge mustard.

Rare: weed around Building 192 complex on North Dairy Road, Central Farm.

Thlaspi arvense L.—field pennycress.

Occasional: weedy in moist open places.

Cabombaceae

Brasenia schreberi J.F. Gmel.—water shield.

Beck Lake; Entomology Road Pond and in other ponds.

List of the flora
Class Magnoliopsida—Dicotyledons
Caprifoliaceae

Callitrichaceae

Callitriche heterophylla Pursh—greater water-starwort.
Swampy area at entrance to Airport; Beaver Dam Creek at Soil Conservation Road, East Farm.

Callitriche stagnalis Scop.—pond water-starwort.
Indian Creek at Sunnyside Road.

Calycanthaceae

Calycanthus floridus L. var. **glaucus** (Willd.) Torr. & A. Gray—Carolina allspice.
Escaped from cultivation, Entomology Road.

Campanulaceae

Lobelia cardinalis L.—cardinal flower.
Occasional: wet places, especially along Beaver Dam Creek and Beaver Dam Creek swamp; planted in Entomology Road meadow.

Lobelia inflata L.—Indian tobacco.

Common: meadows, fields, open forests.

Lobelia puberula Michx.—downy lobelia.

Infrequent: powerline in the Entomology Road area; Springfield Road Meadow; Airport.

***Lobelia siphilitica** L.—great blue lobelia.
Planted: Springfield Road and Poultry Road meadows; native, but not found on BARC in native habitats.

Triodanis perfoliata (L.) Nieuwl.—Venus's looking-glass.

Specularia perfoliata (L.) A. DC.

Occasional: open places and in early succession in meadows.

Cannabaceae

Humulus lupulus L. var. **pubescens** E. Small—hop.
Rare: bank of Little Paint Branch, North Farm.

Caprifoliaceae

Lonicera fragrantissima Lindl. & Paxton
Escape from cultivation near Building 476, Central Farm.

Lonicera japonica Thunb.—Japanese honeysuckle.

Common and abundant: ubiquitous invasive weed in various habitats.

Lonicera maackii (Rupr.) Maxim.—Maack's honeysuckle.

Common: cultivated and naturalized mainly along forest margins.

List of the flora

Class Magnoliopsida—Dicotyledons

Caprifoliaceae

Lonicera morrowii A. Gray—hairy-leaved honeysuckle.

Common: cultivated and naturalized mainly along forest margins.

Lonicera tatarica L.—Tartarian honeysuckle.

Established at edge of forest west of Building 011A, North Farm.

Caryophyllaceae

Arenaria serpyllifolia L.—broad-leaf sandwort.

Occasional: weedy in disturbed soil.

Cerastium fontanum Baumg. subsp. **vulgare** (Hartm.) Greuter & Burdet—mouse-ear chickweed.

C. vulgatum L., misapplied

C. holosteoides Fries

Common: weedy in cultivated and disturbed places.

Cerastium glomeratum Thuill.—clammy mouse-ear chickweed.

C. viscosum L.

Common: weedy in disturbed soil in open places.

Dianthus armeria L.—Deptford pink.

Common: grassy areas and meadows.

***Dianthus barbatus** L.—sweet william.

Planted in National Agricultural Library meadows.

***Gypsophila muralis** L.—cushion baby's breath.

Planted in National Agricultural Library meadows.

Saponaria officinalis L.—soapwort.

Rare: bank of Little Paint Branch, North Farm.

Scleranthus annuus L.—knawel.

Common: weedy in disturbed soil in lawns and meadows.

Silene antirrhina L.—sleepy catchfly.

Rare: weedy field at Airport.

***Silene armeria** L.—sweet william catchfly.

Planted: in meadows, persisting and escaping.

Silene latifolia Poir. subsp. **alba** (Mill.) Greuter & Burdet—white campion.

Lychnis alba Mill.

Occasional: roadsides and fields.

Spergula arvensis L.—corn spurrey.

Rare: meadow near National Agricultural Library.

Spergularia rubra (L.) J. Presl & C. Presl—sand-spurrey.

Rare: weed in cultivated fields at South Farm (Terrell & Winters s.n., 13 Jun 1975, MARY).

Not seen in recent years.

Stellaria aquatica (L.) Scop.—giant chickweed.

Rare: forest border, east end of Bottomland Research Forest.

Stellaria graminea L.—common stitchwort.

Infrequent: meadows.

Stellaria media (L.) Vill. (sens. lat.)—chickweed.

Common and abundant weed in open and grassy places.

Celastraceae

Celastrus orbiculatus Thunb.—Oriental bittersweet.

Infrequent to occasional, sometimes locally abundant: climbing on vegetation, South and Central Farms.

Euonymus alatus (Thunb.) Siebold—winged euonymus.

Infrequent: naturalized, established along forest margins on Entomology Road; vicinity of waste-water treatment area, Central Farm.

List of the flora
Class Magnoliopsida—Dicotyledons
Clusiaceae

Euonymus americanus L.—strawberry bush.
 Occasional: forests, especially on Central Farm.

Euonymus europaeus L.—European spindle-tree.
 Entomology Road area, where possibly planted.

Chenopodiaceae

Atriplex patula L.—halberdleaf orach, spearscale.
 Infrequent: weed in cultivated plots at North Farm; pavements, waste-water treatment area, Central Farm.

Chenopodium album L.—lamb's-quarter.
 Common: weed on disturbed soil, growing to 2.5 m in Sellman Road Compost Meadow.

Chenopodium ambrosioides L.—epazote, wormseed.

Occasional: weedy places.

Chenopodium leptophyllum (Moq.) S.
 Watson—narrow-leaf goosefoot.

Infrequent: Central Farm: weedy around Building 192 complex, North Dairy Road; waste-water treatment area.

Cistaceae

Helianthemum canadense (L.) Michx.—frostweed.
 Infrequent: Coniferous Research Forest, Deciduous Research Forest powerline, and edges of forests in Entomology Road area.

Lechea minor L.—thyme-leaf pinweed.
 Occasional: open places, margins of forests.

Lechea pulchella Raf.—Leggett's pinweed.
L. leggettii Britton & Hollick
 Infrequent: Deciduous Research Forest under powerline; Powerline Meadow, Central Farm.

Clethraceae

Clethra alnifolia L.—sweet pepper bush.
 Common: bottomland and swamp forests.

Clusiaceae

Hypericum canadense L.
 Occasional: moist places under powerlines at Central and East Farms.
Hypericum gentianoides (L.) Britton, Sterns, & Poggenb.—pineweed.
 Infrequent: under powerlines and in meadows.

Hypericum hypericoides (L.) Crantz—St. Andrew's cross.
Ascyrum hypericoides L.
 Occasional: meadows and along powerlines.

List of the flora

Class Magnoliopsida—Dicotyledons

Clusiaceae

Hypericum mutilum L.—dwarf St. Johnswort.
Infrequent: powerlines, moist or wet fields,
meadows and forests.

Hypericum perforatum L.—common St.
Johnswort.

Common: weedy in fields and waste places.

Hypericum punctatum Lam.—spotted St.
Johnswort.

Occasional: weedy in fields and waste places.

Triadenum virginicum (L.) Raf.—marsh St.
Johnswort.

Hypericum virginicum L.

Infrequent: wet places, Beck Lake and
elsewhere.

Convolvulaceae

Calystegia sepium (L.) R. Br.—hedge bindweed.
Occasional: cultivated fields, stream banks.

Ipomoea coccinea L.—redstar.
Rare: cultivated plot, South Farm.

Ipomoea hederacea Jacq.—ivy-leaved morning-
glory.

Occasional: weedy in waste places.

Ipomoea lacunosa L.—white morning-glory.

Infrequent: along railroad, Sunnyside Road;
roadside, Springfield Road, East Farm.

Ipomoea pandurata (L.) G. Mey.—wild potato-
vine.

Infrequent: meadows and fields; Secret Meadow,
Central Farm; Deciduous Research Forest.

Cornaceae

Cornus amomum Mill.—knob-styled dogwood.
Infrequent: ditch, South Farm; Indian Creek
swamp forest.

Cornus florida L.—dogwood.

Common: forest understory.

Cuscutaceae

Cuscuta compacta Juss. ex Choisy—compact
dodder.

Infrequent: Beck Lake shoreline; meadows.

Cuscuta gronovii Willd. ex Schult.—dodder.

Infrequent: Bottomland Deciduous Forest and
Beaver Dam swamp.

Dipsacaceae

Dipsacus fullonum L. subsp. **fullonum**—Fuller's
teasel.

Rare: weedy places near Building 454, Central
Farm.

Dipsacus fullonum subsp. **sylvestris** (Huds.)
Clapham—teasel.

Infrequent: weedy places around buildings and
along ditches.

Ebenaceae

- Diospyros virginiana** L.—persimmon.
Occasional: forests, edges, and roadsides.
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Elaeagnaceae

- Elaeagnus angustifolia** L.—oleaster, Russian olive.
Occasional: roadsides and forest borders.
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Ericaceae

The treatment of this family follows Luteyn et al. (1996).

- Epigaea repens** L.—trailing arbutus.
Occasional: stream banks, under powerlines, and in forests.
- Gaultheria procumbens** L.—wintergreen.
Rare: Deciduous Research Forest. Not seen in recent years.
- Gaylussacia baccata** (Wangenh.) K. Koch—black huckleberry.
Common: forests.
- Gaylussacia dumosa** (Andrews) Torr. & A.
Gray—dwarf huckleberry.
Occasional: forests.
- Gaylussacia frondosa** (L.) Torr. & A. Gray—blue huckleberry, dangleberry.
Common: forests.
- Kalmia angustifolia** L.—sheep laurel.
Rare: sandy places under powerline near bogs, Deciduous Research Forest.
- Kalmia latifolia** L.—mountain laurel.
Occasional: forests.
- Leucothoe racemosa** (L.) A. Gray—fetterbush.
Infrequent: Coniferous Research Forest; Entomology Road forests near pond.
- Lyonia ligustrina** (L.) DC.—male-berry.
Infrequent: Coniferous Research Forest; north shore of Beck Lake; Airport.
- Lyonia mariana** (L.) D. Don—staggerbush.
Infrequent: Coniferous Research Forest near Beck Lake; north of Beaver Dam Road near Springfield Road.
- Rhododendron periclymenoides** (Michx.) Shinn—wild azalea, pinxter-flower.
R. nudiflorum (L.) Torr., nom. illeg.
Occasional: forests and along their borders.
- Rhododendron viscosum** (L.) Torr.—swamp azalea.
Infrequent: moist or swampy forests and their borders.
- Vaccinium corymbosum** L.—highbush blueberry.
V. atrococcum (A. Gray) A. Heller
V. fuscatum Aiton, sens. Luteyn et al. 1996
Common: forests and their borders.
- Vaccinium pallidum** Aiton—low blueberry.
V. vacillans Aiton
Occasional: forests.
- Vaccinium stamineum** L.—deerberry.
Occasional: forests.
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List of the flora
Class Magnoliopsida—Dicotyledons
Euphorbiaceae

Euphorbiaceae

- Acalypha gracilens** A. Gray—short-stalk copperleaf.
Occasional: meadows and fields, especially Poultry Road and National Agricultural Library areas.
- Acalypha rhomboidea** Raf.—rhombic copperleaf.
Occasional: meadows and fields, as noted for preceding.
- Acalypha virginica** L.—Virginia three-seed-mercury.
Infrequent: meadows as noted for preceding.
- Chamaesyce maculata** (L.) Small—spotted spurge.
Euphorbia maculata L.
E. supina Raf.
Occasional: weed in waste places.

- Chamaesyce nutans** (Lag.) Small
Euphorbia nutans Lag.
E. preslii Guss.
Occasional: weed in waste places.
- Croton glandulosus** L.—tooth-leaved croton.
Infrequent: along railroad, Sunnyside Road; meadows near National Agricultural Library.
- Euphorbia corollata** L.—flowering spurge.
Common: fields, meadows, and along roadsides.
- Euphorbia ipecacuanhae** L.—wild ipecac.
Rare: National Agricultural Library meadows.
- Phyllanthus caroliniensis** Walter
Rare: meadow near Building 011A, North Farm.

Fabaceae

- Albizia julibrissin** Durazz.—mimosa, silk tree.
Occasional: escaping from cultivation.
- ***Amorpha canescens** Pursh—lead-plank.
Planted and persisting in Poultry Road Meadow; failed to persist in Building 011A meadow, North Farm.
- Amorpha fruticosa** L.—indigo bush.
Rare: under powerline, Deciduous Research Forest.
- Amphicarpaea bracteata** (L.) Fernald—hog peanut.
Infrequent: lowland forest, Bottomland Research Forest; Entomology Road forest.
- Apios americana** Medik.—groundnut.
Infrequent: moist places, stream banks, East Farm.
- Baptisia tinctoria** (L.) R. Br.—false indigo.
Infrequent: Odell Road west; Deciduous Research Forest.
- Cercis canadensis** L.—redbud.
Rare: one tree by duckweed pond, SE of Log Lodge, Central Farm.
- Chamaecrista fasciculata** (Michx.) Greene—large-flowered partridge-pea.
Cassia fasciculata Michx.
Occasional: meadows.
- Chamaecrista nictitans** (L.) Moench—small-flowered partridge-pea.
Rare to infrequent: border of Deciduous Research Forest; Beaver Dam Road, Central Farm.
- Coronilla varia** L.—crown vetch.
Occasional: escaping from cultivation.
- Crotalaria sagittalis** L.—rattlebox.
Rare: Springfield Road Meadow, East Farm.

List of the flora
Class Magnoliopsida—Dicotyledons
Fabaceae

***Dalea purpurea** Vent.—purple prairie-clover.
Petalostemon purpureus (Vent.) Rydb.
 Planted in meadows.

Desmodium ciliare (Muhl. ex Willd.) DC.—hairy
 small-leaved tick-trefoil.

Rare: oak savanna, Poultry Road.

Desmodium nudiflorum (L.) DC.—naked-
 flowered tick-trefoil.

Rare: forest at end of Entomology Road
 (recorded in 1976). Not seen in later years.

Desmodium paniculatum (L.) DC.—panicked
 tick-trefoil.

Infrequent: thicket, Research Road; elsewhere
 on East Farm.

Kummerowia stipulacea (Maxim.) Makino—
 Korean lespedeza.

Lespedeza stipulacea Maxim.

Occasional: weedy places, lawns, around
 sidewalks.

Kummerowia striata (Thunb.) Schindl.—
 Japanese lespedeza.

Lespedeza striata (Thunb.) Hook. & Arn.

Common: weedy places, lawns, around
 sidewalks.

Lespedeza bicolor Turcz.—shrubby lespedeza.

Field on NASA land, adjacent to Coniferous
 Research Forest; perhaps planted.

Lespedeza cuneata (Dum. Cours.) G. Don—
 sericea lespedeza, Chinese bush-clover.

Common and abundant: roadsides, fields,
 meadows.

Lespedeza hirta (L.) Hornem.—hairy bush-
 clover.

Rare: open places, Deciduous Research Forest;
 not seen in recent years.

Lespedeza procumbens Michx.—trailing bush-
 clover.

Rare: Secret Meadow, end of Poultry Road,
 Central Farm.

Lespedeza repens (L.) W.P.C. Barton—creeping
 bush-clover.

Infrequent: Oak Barren North and Center,
 Central Farm; Deciduous Research Forest.

Lespedeza virginica (L.) Britton—slender bush-
 clover.

Occasional: roadsides, fields; Airport; near
 National Agricultural Library; Deciduous
 Research Forest.

Lotus corniculatus L.—bird's-foot trefoil.

Occasional: grassy places, escape from
 cultivation.

Lupinus perennis L.—wild lupine.

Rare: formerly west edge of Coniferous
 Research Forest; not seen in recent years.

Medicago sativa L.—alfalfa.

Occasional: escape in cultivated fields and
 meadows.

Melilotus albus Medik.—white sweet-clover.

Occasional: meadows and waste places.

Melilotus officinalis Lam.—yellow sweet-clover.

Occasional: meadows and waste places.

Robinia pseudoacacia L.—black locust.

Common: roadsides and borders of forests.

Senna hebecarpa (Fernald) H.S. Irwin &
 Barneby—wild senna.

Cassia hebecarpa Fernald

Rare: Beaver Dam Creek swamp; planted in
 meadows on North, Linkage and Central
 Farms.

Strophostyles helvula (L.) Elliott—annual
 woolly-bean.

Rare to infrequent: meadows.

Tephrosia virginiana (L.) Pers.—goat's rue.

Rare to infrequent: sandy places under
 powerline, Deciduous Research Forest;
 formerly seen in Coniferous Research Forest.

Trifolium arvense L.—rabbit-foot clover.

Infrequent: National Agricultural Library
 meadows; waste-water treatment area, Central
 Farm.

Trifolium campestre Schreb.—low hop-clover.

Common: edges of forests, powerlines, and
 meadows.

List of the flora

Class Magnoliopsida—Dicotyledons

Fabaceae

Trifolium dubium Sibth.—low hop-clover.

Infrequent to occasional: meadows and weedy places.

Trifolium hybridum L.—alsike clover.

Occasional: meadows.

Trifolium incarnatum L.—crimson clover.

Infrequent: escape in cultivated fields.

Trifolium medium L.—zigzag clover.

Rare: woodlot, Springfield Road, East Farm.

Trifolium pratense L.—red clover.

Common: fields, roadsides, and meadows.

Trifolium repens L.—white clover.

Common: lawns, pastures, and meadows.

Vicia grandiflora Scop.—bigflower vetch.

Rare: roadside near National Agricultural Library.

Vicia sativa L. subsp. **nigra** (L.) Ehrh.—narrow-leaved vetch.

Vicia angustifolia L.

Common: meadows, roadsides, and cultivated fields.

Vicia tetrasperma (L.) Schreb.—four-seeded vetch.

Occasional: meadows.

Vicia villosa Roth—hairy vetch.

Occasional: cultivated fields and meadows.

Vicia villosa Roth subsp. **varia** (Host) Corb.—hairy-fruit winter vetch.

Vicia dasycarpa Ten.

Climbing on fence near Dairy area, Central Farm.

Fagaceae

Castanea dentata (Marshall) Borkh.—American chestnut.

Infrequent: mixed forests, persisting only as sprouts and saplings.

Castanea pumila (L.) Mill.—chinquapin.

Infrequent to occasional: forest and their borders.

Fagus grandifolia Ehrh.—American beech.

Common: forests.

Quercus—oaks.

Some trees appear to be hybrids among *Q. marilandica*, *Q. falcata*, or other species. Trees with leaves resembling *Q. lyrata* may be hybrids involving *Q. stellata*.

Quercus acutissima Carruth.—saw-tooth oak.

Planted near National Agricultural Library and producing seedlings in meadows.

Quercus alba L.—white oak.

Common and abundant: a dominant forest tree and the dominant oak in the oak savannas.

Quercus bicolor Willd.—swamp white oak.

Infrequent: Deciduous Research Forest, along small stream, East Farm; one very large tree, oak savanna, Poultry Road; Indian Creek swamp forest.

Quercus coccinea Munchh.—scarlet oak.

Infrequent: forests; large trees on Central Farm.

Quercus falcata Michx.—southern red oak, Spanish oak.

Occasional to common: forests and edges.

Quercus imbricaria Michx.—shingle oak.

Infrequent: border of Coniferous Research Forest; Research Road, Central Farm.

Quercus marilandica Munchh.—blackjack oak.

Infrequent to occasional: forest borders and thickets.

Quercus michauxii Nutt.—swamp chestnut oak.

Rare: forest north of former Food and Drug Admin. (FDA) complex, Central Farm.

List of the flora
Class Magnoliopsida—Dicotyledons
Grossulariaceae

Quercus montana Willd.—chestnut oak.

Quercus prinus L., nom. ambig.

Occasional to common: dry forests; locally abundant in former FDA complex, Central Farm.

Quercus palustris Munchh.—pin oak.

Common: poorly drained forests; sometimes planted.

Quercus phellos L.—willow oak.

Common: poorly-drained forests; sometimes planted.

Quercus rubra L.—northern red oak.

Common: rich forests.

Quercus stellata Wangenh.—post oak.

Infrequent to occasional: forests and savannas.

Quercus velutina Lam.—black oak.

Occasional: forests.

Gentianaceae

Bartonia paniculata (Michx.) Muhl.—screwstem.

Rare: Powerline Bog 2, Deciduous Research Forest.

Bartonia virginica (L.) Britton, Sterns & Poggenb.—yellow screwstem.

Rare to infrequent: powerline swamps in the Deciduous Research Forest; formerly in boggy places at Airport.

Sabatia angularis (L.) Pursh—marsh pink.

Rare: Secret Meadow, Poultry Road.

Geraniaceae

Erodium cicutarium (L.) L'Hér.—filaree.

Common and locally abundant: cultivated fields, lawns and meadows.

Geranium carolinianum L. var. **confertiflorum** Fernald—Carolina cranesbill.

Common: lawns and open places.

Geranium maculatum L.—spotted geranium.

Infrequent: moist forests, Entomology Road near pond; forest, Research Road, Central Farm.

Geranium molle L.—dove-foot cranesbill.

Infrequent: around buildings, roadsides; waste-water areas, Central Farm.

Geranium pusillum L.—small-flower cranesbill.

Rare to infrequent: around buildings North Dairy Road, Central Farm.

Grossulariaceae

Ribes cynosbati L.—prickly gooseberry.

Rare: Indian Creek swamp forest, south of Sunnyside Road.

List of the flora
Class Magnoliopsida—Dicotyledons
Haloragaceae

Haloragaceae

Myriophyllum aquaticum (Vell.) Verdc.—
parrot's feather.
Infrequent: Entomology Road Pond; Beck Lake.

Hamamelidaceae

Hamamelis virginiana L.—witch-hazel.
Rare: Entomology Road forest. Not seen in
1997, 1998.

Liquidambar styraciflua L.—sweet gum.
Common: dominant tree in poorly drained areas;
seedlings invade meadows.

Hydrangeaceae

Philadelphus coronarius L.—mock orange.
Ornamental species established along gravel
road paralleling Beaver Dam Creek, Research
Road, Central Farm.

Juglandaceae

Carya glabra (Mill.) Sweet—pignut hickory.
Infrequent to occasional: Bottomland Research
Forest; Entomology Road forest, Central Farm;
savannas.
Carya ovalis (Wang.) Sarg.—sweet pignut.
Large tree behind building on Poultry Road,
Central Farm.

Carya tomentosa (Poir.) Nutt.—mockernut
hickory.
C. alba (L.) Nutt., nom. ambig.
Occasional: Deciduous Research Forest; forest
along Entomology Road; adjacent to oak
savanna, Poultry Road.
Juglans nigra L.—black walnut.
Occasional: woodland and margins of forests.

Lamiaceae

Ajuga reptans L.—creeping bugleweed.
Escape from cultivation in forest near
greenhouses, end of Entomology Road.
Clinopodium vulgare L.—wild basil.
Satureja vulgaris (L.) Fritsch
Rare: Beaver Dam Creek swamp, Central Farm.

Glechoma hederacea L.—gill-over-the-ground,
ground ivy.
Common and abundant: weedy in open places.
Hedeoma pulegioides (L.) Pers.—American
pennyroyal.
Rare: Poultry Road oak savanna.

List of the flora
Class Magnoliopsida—Dicotyledons
Lauraceae

Lamium amplexicaule L.—henbit.

Common: weedy in cultivated fields, lawns and waste places.

Lamium purpureum L.—purple dead-nettle.

Common and abundant: weedy in cultivated fields, lawns and waste places.

Leonurus cardiaca L.—common motherwort.

Infrequent to occasional: edges of fields and margins of forests.

Lycopus uniflorus Michx.—northern water-horehound.

Rare: Beck Lake border.

Lycopus virginicus L.—water-horehound.

Occasional: moist or wet meadows.

Mentha × citrata Ehrh.—lemon mint.

Rare: in ditch, North Farm.

Mentha spicata L.—spearmint.

Infrequent: roadsides, N. Dairy Road; FDA complex, Central Farm.

***Monarda citriodora** Cerv. ex Lag. (sens. lat.)—lemon beebalm.

Planted: National Agricultural Library meadows.

***Monarda didyma** L.—scarlet beebalm.

Planted: North Farm meadow.

Monarda punctata L.—horsemint.

Infrequent: forest border on Research Road; roadside on Springfield Road. Planted: Poultry Road and Springfield Road meadows.

Perilla frutescens (L.) Britton—perilla.

Occasional: edges of cultivated fields, meadows and along powerlines.

Prunella vulgaris L.—selfheal, heal-all.

Common: open places, forests.

***Pycnanthemum muticum** (Michx.) Pers.—

Clustered mountain-mint.

Planted: meadows on North and Central Farms.

Pycnanthemum tenuifolium Schrader—narrow-leaved mountain-mint.

Occasional: roadsides, powerlines, and meadows; also planted in certain meadows.

Salvia lyrata L.—lyre-leaf sage.

Occasional: meadows, fields, under powerlines.

Scutellaria elliptica Muhl. ex Spreng.—hairy skullcap.

Rare: oak savanna, Poultry Road.

Scutellaria integrifolia L.—large skullcap.

Infrequent: Poultry Road savanna; Oak Barren

Meadow: Powerline Meadow and Secret Meadow, Central Farm.

Scutellaria lateriflora L.—blue skullcap.

Infrequent: Beaver Dam Creek swamp;

Deciduous Research Forest.

Trichostema dichotomum L.—blue curls.

Infrequent: meadows, Airport; under powerlines.

Lauraceae

Lindera benzoin (L.) Blume—spice bush.

Common and abundant: bottomland forests.

Sassafras albidum (Nutt.) Nees—sassafras.

Common: forests, hedgerows, and edges.

List of the flora
Class Magnoliopsida—Dicotyledons
Lentibulariaceae

Lentibulariaceae

Utricularia gibba L.—creeping bladderwort.
Margin of Beck Lake.

Utricularia subulata L.—zigzag bladderwort.
Rare: In mud, Powerline Bog 1, Deciduous
Research Forest.

Utricularia vulgaris L.—common bladderwort.
Shallow water, north side of Beck Lake.

Linaceae

***Linum lewisii** Pursh—prairie flax.
Planted: meadows on North Farm.

Linum striatum Walter—ridged yellow flax.
Infrequent: open places; Beaver Dam Powerline
Meadow; edge of Deciduous Research Forest.

Magnoliaceae

Liriodendron tulipifera L.—tulip tree.
Common and abundant: important forest tree.

Magnolia acuminata L.—cucumber tree.
Rare: forest along stream, Springfield Road, U.
S. Department of State, formerly USDA land.

Magnolia virginiana L.—sweetbay magnolia.
Occasional: Coniferous, Deciduous and Wetland
Research Forests; vicinity Beaver Dam Creek,
Central Farm; Indian Creek swamp forest.

Malvaceae

Abutilon theophrasti Medik.—velvetleaf.
Occasional: weedy in cultivated fields and other
open places.

Hibiscus moscheutos L.—Rose mallow.
H. palustris L.
Infrequent: North Farm: bank of Little Paint
Creek; swamp near Beltway (I-495).

Hibiscus syriacus L.—Rose of Sharon.
Along Beaver Dam Creek, Central Farm,
escaped or planted.

Malva neglecta Wallr.—cheeses, common
mallow.
Occasional: weedy in waste places.

Melastomataceae

Rhexia mariana L.—Maryland meadow beauty.
Occasional: wet or moist meadows, often under
powerlines.

Rhexia virginica L.—meadow beauty.
Occasional: wet or moist meadows, often under
powerlines.

List of the flora
Class Magnoliopsida—Dicotyledons
Oleaceae

Molluginaceae

Mollugo verticillata L.—carpetweed.

Occasional: weedy in cultivated fields and waste places.

Monotropaceae

Monotropa hypopithys L.—pinesap.

Rare: rich forests of the Patuxent Wildlife Research Center (former BARC land) on the southeastern edge of the Airport (*Broome 1423*, MARY).

Monotropa uniflora L.—Indian pipe.

Infrequent: near Beck Lake; Entomology Road forest.

Moraceae

Maclura pomifera (Raf.) C.K. Schneid.—osage orange.

Infrequent: thickets, borders, Deciduous Research Forest in 1983; waste-water treatment area in 1999.

Morus alba L.—white mulberry.

Common: forests, meadows and cultivated fields.

Morus rubra L.—red mulberry.

Occasional: forests.

Nymphaeaceae

Nuphar advena (Aiton) W.T. Aiton—spatter dock, yellow pond-lily.

Beck Lake and other ponds.

Nymphaea odorata Aiton—fragrant water-lily.

Beck Lake (f. *rubra* (E. Guillon) Conard) and other ponds, where the white form predominates.

Nyssaceae

Nyssa sylvatica Marshall—black gum.

Common: forests.

Oleaceae

Chionanthus virginicus L.—fringe tree.

Infrequent: Indian Creek swamp forest; Entomology Road forest.

Fraxinus americana L.—white ash.

Occasional to common: forests.

List of the flora

Class Magnoliopsida—Dicotyledons

Oleaceae

Fraxinus pennsylvanica Marshall—red ash.

Rare: bottomland in waste-water treatment area,
Central Farm.

Ligustrum obtusifolium Siebold & Zucc.—
border privet.

Escaped from cultivation; two collections from
Central Farm: Poultry Road; FDA complex.

Ligustrum quihoui Carrière

Escaped from cultivation; two collections from
Central Farm: Poultry Road; Entomology
Road.

Onagraceae

Circaea lutetiana L. subsp. **canadensis** (L.)

Asch. & Magnus—enchanter's nightshade.

Occasional: forests.

Epilobium coloratum Biehler—eastern willow-
herb.

Infrequent: wet meadows.

Ludwigia alternifolia L.—seedbox.

Infrequent: moist places; Springfield Road
Meadow.

Ludwigia palustris (L.) Elliott—water purslane.

Occasional: wet places.

Oenothera biennis L. var. **biennis**—evening
primrose.

Common: weedy in waste places.

Oenothera fruticosa L.—narrow-leaved
sundrops.

Infrequent: swampy areas near Beck Lake;
Secret Meadow, Poultry Road.

Oxalidaceae

Oxalis—wood-sorrel.

Treatments of the yellow species differ widely.

Here we follow “Flora Europaea” (Young
1968). *Oxalis europaea* Jordan is expected to
occur here, but existing specimens were
identified as *O. stricta*.

Oxalis grandis Small—great yellow wood-sorrel.

Rare: Airport bog.

Oxalis stricta L.—upright wood-sorrel.

Oxalis dillenii Jacq.

Common: fields, meadows, open forests.

Oxalis violacea L.—violet wood-sorrel.

Infrequent to occasional: forests and open
places.

Papaveraceae

Corydalis flavula (Raf.) DC.—pale corydalis.

Rare: border of forest along Beaver Dam Creek
east of Research Road, Central Farm.

***Eschscholzia californica** Cham.—California
poppy.

Planted in National Agricultural Library
meadows.

***Papaver nudicaule** L.—Iceland poppy.

Planted in National Agricultural Library
meadows

List of the flora
Class Magnoliopsida—Dicotyledons
Polygalaceae

***Papaver rhoeas** L.—corn poppy.
Planted in National Agricultural Library
meadows.

Sanguinaria canadensis L.—bloodroot.
Infrequent: Central Farm: forest at NW end of
Beaver Dam Road; along Beaver Dam Creek,
Research Road.

Phytolaccaceae

Phytolacca americana L.—pokeweed.
Common: weedy in cultivated fields and
meadows.

Plantaginaceae

Plantago aristata Michx.—bracted plantain.
Occasional: poor sandy soils of lawns and
meadows.

Plantago lanceolata L.—buck plantain.
Common and abundant: weedy in fields,
meadows, and lawns.

Plantago major L.—common plantain.

Weedy in cultivated fields, meadows, and lawns.

Plantago rugelii Decne.—Rugel's plantain.

Weedy in cultivated fields, meadows, and lawns.

Plantago virginica L.—hoary plantain.

Occasional: cultivated fields and waste places.

Platanaceae

Platanus occidentalis L.—sycamore.
Common: bottomland forests.

Polemoniaceae

***Phlox maculata** L.—meadow phlox.
Planted: National Agricultural Library meadow.

Phlox paniculata L.

Escaped from cultivation on Powder Mill Road.

Polygalaceae

Polygala curtissii A. Gray—Curtiss's milkwort.
Occasional: meadows, open poorly drained
places and under powerlines, Central and East
Farms.

Polygala lutea L.—orange milkwort.
Rare: Airport bog; not seen recently.

List of the flora

Class Magnoliopsida—Dicotyledons

Polygalaceae

Polygala mariana Mill.—Maryland milkwort.
Infrequent: meadows, open poorly drained
places and under powerlines in Central and
East Farms.

Polygala nuttallii Torr. & A. Gray—Nuttall's
milkwort.
Rare: under powerline, Deciduous Research
Forest.

Polygonaceae

Polygonum arenastrum Jordan ex Boreau—
oval-leaf knotweed.
Weedy around buildings, North Dairy Road,
Central Farm; Springfield Road Meadow, East
Farm.

Polygonum arifolium L.—halberd-leaved
tearthumb.
Occasional: wet places.

Polygonum aviculare L.—prostrate knotweed.
Weedy in lawns, cultivated fields, and meadows.

Polygonum bellardii All.—narrowleaf knotweed.
P. neglectum Besser
Cultivated field, Central Farm.

Polygonum cespitosum Blume—Oriental lady's
thumb.
Common: weedy in forests and open places.

Polygonum cuspidatum Siebold & Zucc.—
Japanese knotweed.
Occasional: roadsides.

Polygonum hydropiper L.
Rare: moist or wet places, Deciduous Research
Forest at west end of power line.

Polygonum hydropiperoides Michx.—swamp
smartweed.
Occasional: wet places.

Polygonum lapathifolium L.
Rare: border of waste-water treatment pond,
Central Farm.

Polygonum pensylvanicum L.—Pennsylvania
smartweed.
Occasional: wet places.

Polygonum perfoliatum L.—mile-a-minute
weed.

Common and abundant: pernicious weed in
edges, meadows, fields, and open places in
forests.

Polygonum persicaria L.—spotted lady's thumb.
Occasional: forests and meadows.

Polygonum punctatum Elliott—dotted
smartweed.
Common: wet places.

Polygonum sagittatum L.—arrow-leaved
tearthumb.
Occasional: wet places.

Polygonum scandens L.—climbing false
buckwheat.
Rare: on fence, Springfield Road, East Farm.

Polygonum virginianum L.—jumpseed.
Infrequent: moist forest, Log Lodge forest
complex; Beaver Dam Creek drainage, Central
Farm.

Rumex acetosella L.—common sheep-sorrel.
Common: cultivated fields, lawns, forest edges
and meadows.

Rumex crispus L.—curly dock.
Common: weedy in open places.

Rumex obtusifolius L.—bitter dock.
Common: weedy in open places.

List of the flora
Class Magnoliopsida—Dicotyledons
Ranunculaceae

Portulacaceae

Claytonia virginica L.—spring-beauty.
Common, sometimes locally abundant,
especially along Entomology Road, Central
Farm.

Portulaca oleracea L.—purslane.
Common: weedy in cultivated plots, early
successional fields and other open places.

Primulaceae

Anagallis arvensis L.—scarlet pimpernel.
Infrequent: grassy or waste places and in early
succession in meadows.

Lysimachia quadrifolia L.—whorled loosestrife.
Infrequent: Odell Road; Deciduous and
Bottomland Research Forests.

Pyrolaceae

Chimaphila maculata (L.) Pursh—spotted
wintergreen.
Occasional: acid upland forests.

Chimaphila umbellata (L.) W.P.C. Barton—
pipsissewa.
Infrequent: Deciduous Research Forest;
Entomology Road.

Ranunculaceae

Anemone quinquefolia L.—wood anemone.
Rare: Indian Creek swamp forest near Sunnyside
Road (one plant seen in 1997).

Clematis virginiana L.—virgin's bower.
Infrequent: meadows and open places.

Ranunculus abortivus L.—small-flowered
crowfoot, kidney-leaf buttercup.
Common: meadows, forests and cultivated
fields.

Ranunculus bulbosus L.—bulbous buttercup.
Common and abundant: lawns, roadsides,
meadows, and fields.

Ranunculus hispidus Michx.—bristly buttercup.
Rare: forest at Entomology Road pond.

Ranunculus recurvatus Poir.—hooked crowfoot.
Infrequent: lowland forests, Indian Creek swamp
forest; Entomology Road.

Ranunculus sardous Crantz—hairy buttercup.
Infrequent: weedy around buildings, North Dairy
Road and waste-water area, Central Farm; field
at Airport.

Ranunculus sceleratus L.—cursed buttercup.
Occasional: moist or wet places.

Thalictrum pubescens Pursh—tall meadow-rue.
Infrequent: Indian Creek swamp forest;
Bottomland Research Forest; along a tributary
of Beaver Dam Creek north of Entomology
Road.

Thalictrum thalictroides (L.) Eames & Boivin—
rue anemone.

Anemonella thalictroides (L.) Spach

Rare: forest near pond at end of Entomology
Road.

List of the flora
Class Magnoliopsida—Dicotyledons
Rhamnaceae

Rhamnaceae

Ceanothus americanus L.—New Jersey tea.
Rare: Poultry Road savanna.

Rhamnus cathartica L.
Along trail around Log Lodge pond, Central Farm, where possibly planted.

Rosaceae

Amelanchier arborea (Michx. f.) Fernald—shadbush, serviceberry.
Occasional: well-drained forests and their borders.

Amelanchier canadensis (L.) Medik.—shadbush, serviceberry.

Infrequent: Central Farm: forests and their borders, Odell Road; Biocontrol Road area.

Aronia arbutifolia (L.) Pers.—red chokeberry.
Pyrus arbutifolia (L.) L.f.

Infrequent: Deciduous and Bottomland Research Forests.

Aronia melanocarpa (Michx.) Elliott—black chokeberry.

Reported in 1976; not seen in recent years.

Duchesnea indica (Andrews) Focke—Indian strawberry.

Common: lawns, meadows.

Fragaria virginiana Duchesne—wild or Virginia strawberry.

Common: meadows, fields, and powerlines.

Geum canadense Jacq.—white avens.

Infrequent: Indian Creek swamp forest; Entomology Road area; forest, South Farm.

Malus toringo (Siebold) Siebold ex de Vriese—Toringo crab-apple.

Malus sieboldii (Regel) Rehder

Pyrus sieboldii Regel

Common and prolific weedy escape from cultivation, a shrub or small tree invading meadows and fields.

Physocarpus opulifolius (L.) Maxim.—ninebark.
Escaped from cultivation, Entomology Road.

Potentilla argentea L.—silver-leaf cinquefoil.
Infrequent: weedy in National Agricultural Library meadows; also North Dairy Road and FDA complex, Central Farm.

Potentilla canadensis L.—dwarf cinquefoil.
Common: along powerlines, fields, and meadows.

Potentilla norvegica L. var. **hirsuta** (Michx.) Lehm.—rough cinquefoil.

P. monspeliensis L.

Infrequent: East *Bidens* Meadow; Springfield Road field.

Potentilla recta L.—upright cinquefoil.
Occasional: meadows; near National Agricultural Library; FDA complex, Central Farm.

Potentilla simplex Michx.—oldfield cinquefoil.
Common: lawns, meadows.

Prunus persica (L.) Batsch—peach.
Border of forest opposite Log Lodge Visitors Center; North Cherry Hill Meadow.

Prunus serotina Ehrh.—black cherry.
Common forest tree; seedlings invading meadows and fields.

Pyrus calleryana Decne. 'Bradford'—Bradford pear.
Planted: invading meadows, thickets and forest borders.

List of the flora
Class Magnoliopsida—Dicotyledons
Rubiaceae

Rosa multiflora Thunb.—multiflora rose.
Common: meadows, fields, thickets, spreading rapidly and becoming locally abundant.

Rosa virginiana Mill.—pasture rose.
Infrequent: Bottomland Research Forest; meadow south of National Agricultural Library.

Rubus allegheniensis Porter—Allegheny blackberry.
Common: fields and meadows, a pernicious weed.

Rubus argutus Link—southern blackberry.
Infrequent: FDA complex, Central Farm.

Rubus enslenii Tratt.—southern dewberry.
Occasional: mixed forests.

Rubus flagellaris Willd.—northern dewberry.
Infrequent: mixed forests and along edges, Entomology Road and elsewhere.

Rubus hispidus L.—bristly dewberry.
Occasional: poorly-drained places in meadows and forests.

Rubus occidentalis L.—black raspberry.
Infrequent: mixed forests.

Rubus pensilvanicus Poir.—Pennsylvania blackberry.
Infrequent: FDA complex, Central Farm.

Rubus phoenicolasius Maxim.—wineberry.
Infrequent: two colonies; established at Deciduous Research Forest under powerline near bog; forest on south side of Beck Lake. These plants are somewhat atypical.

Sanguisorba canadensis L.—Canadian burnet.
Rare: along stream on North Farm. Not seen in recent years; probably extirpated.

Rubiaceae

Cephalanthus occidentalis L.—buttonbush.
Infrequent: Beck Lake area; drainage from the National Agricultural Library pond; Airport.

Cruciata pedemontana (Bellardi) Ehrend.—tiny-flowered bedstraw.

Galium pedemontanum (Bellardi) All.
Rare: Poultry Road oak savanna.

Diodia teres Walter—buttonweed.
Common: weedy in fields, lawns and meadows.

Galium aparine L.—cleavers.
Common: meadows and forests.

Galium circaeans Michx.—wild licorice.
Infrequent to occasional: forests.

Galium tinctorium (L.) Scop.—Clayton's bedstraw.
Infrequent to occasional: moist or wet places.

Galium triflorum Michx.—sweet-scented bedstraw.
Infrequent: forests, Coniferous Research Forest; Entomology Road.

Houstonia caerulea L.—blueets.
Common: roadsides, lawns, meadows, and open forests.

Houstonia purpurea L. var. **purpurea**—Venus'-pride, large houstonia.
Infrequent: Poultry Road savanna; edge of forest, Beaver Dam Road; Secret Meadow, Central Farm.

Mitchella repens L.—partridgeberry.
Common: forests.

List of the flora

Class Magnoliopsida—Dicotyledons

Salicaceae

Salicaceae

Populus alba L.—white or silverleaf poplar.
Planted or escaped, Coniferous Research Forest.

Populus deltoides W. Bartram ex Marshall—
cottonwood.
Rare: large tree along stream, waste-water
treatment area, Central Farm.

Populus grandidentata Michx.—large toothed
aspens.

Occasional: borders of forests.

Salix babylonica L.—weeping willow.
Waste-water treatment area, Central Farm.

Salix nigra Marshall—black willow.
Common: along streams, moist thickets.

Santalaceae

Comandra umbellata (L.) Nutt.—bastard
toadflax.
Infrequent: powerline in Deciduous Research
Forest; forest at end of Entomology Road.

Sarraceniaceae

Sarracenia purpurea L.—pitcher plant.
Rare or infrequent: Beck Lake, one plant seen in
1983; Powerline Bog 1, Deciduous Research
Forest, three plants seen in 1999, one
flowering. Origin of this species unknown;
possibly introduced some years ago.

Saxifragaceae

Penthorum sedoides L.—ditch stonecrop.
Infrequent: Central Farm: Beaver Dam Creek
swamp and drainage to the west; waste-water
area.

Scrophulariaceae

Agalinis purpurea (L.) Pennell—purple agalinis.
Rare: field at Airport in 1976. Not seen in recent
years.

Chaenorrhinum minus (L.) Lange—dwarf
snapdragon.
Rare: along railroad, Sunnyside Road.

List of the flora
Class Magnoliopsida—Dicotyledons
Solanaceae

- Chelone glabra** L.—turtlehead.
 Rare: wet places, drainage leading to Beck Lake.
- Kickxia elatine** (L.) Dumort.—sharpleaf cancerwort.
 Rare: weedy places, Central Farm.
- Linaria canadensis** (L.) Dum. Cours.—blue toadflax.
Nuttallanthus canadensis (L.) D.A. Sutton
 Common: meadows and fields, often in sandy, poor soil.
- Linaria vulgaris** Mill.—butter-and-eggs.
 Infrequent: weedy places, Airport, and elsewhere.
- Lindernia dubia** (L.) Pennell (sens. lat.)—false pimpernel.
 Rare: wet places, Poultry Road, Central Farm.
- Melampyrum lineare** Desr. var. *latifolium* Bart.—broad-leaf cow-wheat.
 Infrequent: Deciduous Research Forest, under powerlines.
- Mimulus alatus** Aiton—sharp-wing monkey flower.
 Infrequent: swampy area, Poultry Road; Beaver Dam swamp.
- Paulownia tomentosa** (Thunb.) Steud.—imperial tree, empress tree.
 Infrequent: fencerows and forest margins.

- Penstemon digitalis** Nutt. ex Sims—foxglove beard-tongue.
 Infrequent: powerline north of Entomology Road; Airport; meadow near National Agricultural Library.
- Verbascum blattaria** L.—moth mullein.
 Occasional: roadsides and in meadows.
- Verbascum thapsus** L.—great mullein.
 Occasional: open places.
- Veronica agrestis** L.—field speedwell.
 Occasional: weedy places; Odell West; Bottomland Research Forest.
- Veronica arvensis** L.—corn speedwell.
 Common: weedy in waste places.
- Veronica hederifolia** L.—ivy-leaf speedwell.
 Occasional: Indian Creek swamp forest; other lowland forests.
- Veronica officinalis** L.—common speedwell.
 Common: open forests, savannas.
- Veronica peregrina** L.—purslane speedwell.
 Occasional: weedy in waste places.
- Veronica persica** Poir.—bird's-eye speedwell.
 Common: weedy in waste places.
- Veronica polita** Fr.—gray field speedwell.
 Rare: lawn, Building 003, North Farm.
- Veronica serpyllifolia** L.—thyme-leaf speedwell.
 Occasional: weedy in grassy places and cultivated fields.

Simaroubaceae

- Ailanthus altissima** (Mill.) Swingle—tree-of-heaven, copal-tree.
 Common: forest margins.

Solanaceae

- Datura stramonium** L.—jimsonweed.
 Occasional: weedy in cultivated fields, roadsides, and waste places.
- Physalis heterophylla** Nees—clammy ground-cherry.
 Rare: around buildings northeast of Building 265, Central Farm.

List of the flora

Class Magnoliopsida—Dicotyledons

Solanaceae

Physalis longifolia Nutt. var. **subglabrata** (Mack. & Bush) Cronquist—smooth ground-cherry.

P. subglabrata Mack. & Bush

Infrequent: meadows, E. *Bidens* Meadow, Central Farm.

Solanum carolinense L.—horsenettle.

Common: weedy in fields and meadows.

Solanum dulcamara L.—climbing nightshade.
Occasional: edges of fields, thickets.

Solanum nigrum L. (sens. Gleason & Cronquist 1991)—black nightshade.

Infrequent: weedy around buildings, Central Farm.

Ulmaceae

Ulmus americana L.—American elm.

Occasional: forests.

Ulmus rubra Muhl.—slippery elm.

Occasional: Bottomland Research Forest and other lowland forests.

Ulmus viminalis Lodd. ex Bean—English elm.

U. procera Salisb.

Planted in National Agricultural Library oak savanna and South meadows; producing many seedlings.

Urticaceae

Boehmeria cylindrica (L.) Sw.—false nettle.

Common: open moist or wet places.

Parietaria pensylvanica Muhl. ex Willd.—

Pennsylvania pellitory.

Infrequent: meadows, open forests.

Pilea pumila (L.) A. Gray—clearweed, richweed.

Infrequent: bottomland forests and open places.

Urtica dioica L. var. **procera** (Muhl. ex Willd.)

Wedd.—slender stinging nettle.

U. gracilis Aiton

Infrequent: Deciduous Research Forest and Entomology Road area.

Valerianaceae

Valerianella locusta (L.) Laterr.—common corn-salad, lamb's lettuce.

Common: cultivated fields and meadows, at times abundant.

Valerianella radiata (L.) Dufr.—beaked corn-salad.

Infrequent: Airport roadside; Cherry Hill North Meadow; Sellman East Meadow, North Farm.

Verbenaceae

Verbena hastata L.—blue vervain.
Occasional: fields and meadows. Planted in
Poultry Road meadow.

Verbena urticifolia L. white vervain.
Occasional: fields and meadows.

Violaceae

Viola arvensis Murray—European field pansy.
Common: cultivated and fallow fields.

Viola brittoniana Pollard—Britton's violet.
Rare: Deciduous Research Forest under
powerline.

Viola cucullata Aiton—blue marsh violet.
Infrequent to occasional: Indian Creek swamp
forest, and other lowland forests.

Viola lanceolata L.—lance-leaved violet.
Infrequent to occasional: moist, wet, or boggy
places, East Farm, including Airport.

Viola palmata L. var. **palmata**—early blue
violet.
Rare: Poultry Road oak savanna.

Viola primulifolia L.—primrose-leaf violet.
Occasional: research forests; Entomology Road
meadow, sometimes appears to intergrade with
V. lanceolata.

Viola rafinesquii Greene—Rafinesque's wild or
field pansy.
Common and abundant: fields, meadows, and
lawns.

Viola sagittata Aiton—arrow-leaf violet.
Occasional: Poultry Road savanna; powerline
along Beaver Dam Road; Entomology Road
pond forest.

Viola sororia Willd. (sens. Gleason & Cronquist
1991)—hooded or dooryard violet.
V. papilionacea Pursh
Common: lawns and open grassy places, forests.

Vitaceae

Parthenocissus quinquefolia (L.) Planch.—
Virginia creeper.
Common: forests and open places.

Vitis aestivalis Michx.
Deciduous Research Forest; around dairy
buildings; waste-water treatment area, Central
Farm.

Vitis labrusca L.—fox grape.
Occasional: thickets, forest borders.

Vitis riparia Michx.—riverbank grape.
Fencerow, Beaver Dam Road, Central Farm.

Vitis vulpina L.—winter grape.
Forest along Entomology Road, Central Farm.

List of the flora

Notes

Class Liliopsida—Monocotyledons

Alismataceae

Alisma subcordatum Raf.—American water-plantain.

Infrequent: swampy lowlands, Beaver Dam Creek, Central Farm; Airport meadow.

Sagittaria engelmanniana J. G. Sm.—Engelmann's arrowhead.

Infrequent: spring area east of the Entomology Road building complex and powerline swamps in the Deciduous Research Forest.

Identifications tentative.

Sagittaria latifolia Willd. var. **latifolia**—broadleaf arrowhead.

Rare: Deciduous Research Forest.

Sagittaria latifolia Willd. var. **pubescens** (Muhl. ex Nutt.) J. G. Sm.—hairy broadleaf arrowhead.

Infrequent: margins of Beck Lake; Bottomland Research Forest; Beaver Dam Creek just south of Beaver Dam Swamp; powerline bogs.

Alliaceae

Allium schoenoprasum L.—chives.

Escaped from cultivation in Secret Meadow, Poultry Road, Central Farm.

Allium vineale L.—wild garlic.

Common and abundant: weedy in lawns and grassy places.

Amaryllidaceae

Narcissus pseudonarcissus L.—daffodil.

Common: escapes freely from cultivation.

Araceae

Arisaema triphyllum (L.) Schott—jack-in-the-pulpit.

Occasional: rich forests.

Peltandra virginica (L.) Schott—arrow-arum.

Infrequent: swamp, Beaver Dam Creek at Research Road (locally abundant); swampy area, Soil Conservation Road.

Symplocarpus foetidus (L.) Salisb. ex W.P.C. Barton—skunk-cabbage.

Common: swampy lowlands.

List of the flora
Class Liliopsida—Monocotyledons
Asparagaceae

Asparagaceae

Asparagus officinalis L.—asparagus.
Infrequent: cultivated fields and fencerows.

Commelinaceae

Commelina communis L.—dayflower.
Occasional: weedy in waste places.

Tradescantia virginiana L.—Virginia
spiderwort.
Rare: open place by Mitigation Area pond,
entrance to Airport.

Cyperaceae

Bulbostylis capillaris (L.) Kunth ex C.B. Clarke
Rare: under powerline, oak barren savanna,
Central Farm.
Carex abscondita Mack.
Occasional: rich forests.
Carex albicans Willd. ex Spreng.
Infrequent: meadows, forests.
Carex albolutescens Schwein.
Infrequent: margins of forests.
Carex annectens (E.P. Bicknell) E.P. Bicknell
C. vulpinoidea Michx. var. *ambigua* F. Boott
Common: dry meadows.
Carex aquatilis Wahlenb.
Infrequent: moist to wet areas. Soil Conservation
Road and near the entrance to the Airport.
Carex atlantica L.H. Bailey var. *atlantica*
C. incompta E. P. Bicknell
Occasional: swamps and marshes.
Carex atlantica L.H. Bailey var. *capillacea* (L.H.
Bailey) Reznicek
C. howei Mack.
Common: swamps and marshes, the more
common variety on BARC.
Carex blanda Dewey
Occasional: pastures and powerline cuts.
Carex cephalophora Muhl. ex Willd.
Infrequent: meadows and pastures.

Carex complanata Torr. & Hook. var.
complanata
Infrequent: Beck Lake area.
Carex crinita Lam.
Common: wet places, swamps.
Carex debilis Michx.
Occasional: floodplain forests, meadows,
swamps.
Carex digitalis Willd.
Central Farm: edge of pond.
Carex divisa Huds.
Rare: wooded pasture along Poultry Road.
Carex festucacea Schkuhr ex Willd.—fescue
sedge.
Occasional: wet places at forest edges.
Carex flaccosperma Dewey
Common: upland meadows, forest margins.
Carex folliculata L.
Common: moist forests, swamps, boggy places.
Carex frankii Kunth—Frank's sedge.
Common: ditches, wet meadows.
Carex glaucodea Tuck. ex Olney
C. flaccosperma var. *glaucodea* (Tuck. ex
Olney) Kük.
Airport meadow.

List of the flora
Class Liliopsida—Monocotyledons
Cyperaceae

- Carex gracilescens** Steud.
Infrequent to occasional: among huckleberry understory in mixed forests.
- Carex hirsutella** Mack.
C. complanata var. *hirsuta* (Willd.) Gleason
Meadows, Central and East Farms.
- Carex hormathodes** Fernald
Edges of wet forests.
- Carex intumescens** Rudge
Common: wet meadows, forests along shallow streams.
- Carex laevivaginata** (Kük.) Mack.
Occasional: wet places.
- Carex laxiculmis** Schwein.
Rich forests.
- Carex louisianica** L.H. Bailey—Louisiana sedge.
Infrequent: Beck Lake area.
- Carex lupulina** Muhl. ex Willd.—hop sedge.
Common: ditches, meadows, under powerlines.
- Carex lurida** Wahlenb.
Common: swamps, ditches, under powerlines.
- Carex normalis** Mack.
Rare: wet meadow west of Building 465, Central Farm.
- Carex pensylvanica** Lam.—Pennsylvania sedge.
Rare: edge of pond near jct. of Entomology and Powder Mill Roads, Central Farm.
- Carex radiata** (Wahlenb.) Small
Infrequent: wet areas, Indian Creek; Entomology Road.
- Carex rosea** Schkuhr ex Willd.
C. convoluta Mack.
Rare: Indian Creek swamp forest.
- Carex scoparia** Schkuhr ex Willd.
Common: ditches, powerlines.
- Carex seorsa** Howe
Common: wet soil in forests.
- Carex squarrosa** L.—squarrose sedge.
Occasional: floodplain forests and savannas.
- Carex stipata** Muhl. ex Willd.
Occasional: wet places along powerlines, floodplain forests.
- Carex straminea** Willd. ex Schkuhr
Rare: oak barren savanna.
- Carex stricta** Lam.
Infrequent: powerlines, sphagnum bog, Coniferous Research Forest.
- Carex styloflexa** Buckley
Rare: forest, Beaver Dam Road.
- Carex swanii** (Fernald) Mack.
C. virescens Muhl. ex Willd. var. *swanii* Fernald
Occasional: moist places.
- Carex torta** W. Boott ex Tuck.
Common: wet places.
- Carex tribuloides** Wahlenb. var. *tribuloides*
Occasional: powerlines, shores of ponds, floodplain forests.
- Carex tribuloides** Wahlenb. var. *reducta* A. Gray
C. projecta Mack.
Occasional: standing water or wet meadows.
- Carex typhina** Michx.—cat-tail sedge.
Occasional: floodplain forests.
- Carex virescens** Muhl. ex Willd.
Forest borders.
- Carex vulpinoidea** Michx.—fox sedge.
Common: ditches and wet meadows.
- Cyperus echinatus** (L.) A.W. Wood—globose cyperus.
C. ovularis (Michx.) Torr.
Occasional: meadows, fields.
- Cyperus esculentus** L.—yellow nutsedge, chufa.
Occasional to common: meadows, fields.
- Cyperus iria** L.
Rare: weed by National Agricultural Library parking lot.
- Cyperus lancastricensis** Porter
Infrequent: meadows, Beaver Dam Road west of Parkway; meadow by Building 465, Central Farm.

List of the flora
Class Liliopsida—Monocotyledons
Cyperaceae

Cyperus lupulinus (Spreng.) Marcks

Cyperus filiculmis Vahl

Occasional: meadows, fields.

Cyperus refractus Engelm. ex Boeck.

Occasional: meadows.

Cyperus retrorsus Chapm.

Infrequent: moist meadows, Building 465 meadow; Statistics Lab Meadow; Deciduous Research Forest area.

Cyperus strigosus L.

Common: fields, meadows and waste places.

Dulichium arundinaceum (L.) Britton—three-square sedge.

Infrequent: border of Beck Lake; wet places in Building 465 Meadow, Central Farm.

Eleocharis acicularis (L.) Roem. & Schult.—needle spikerush.

Infrequent: north shore of Beck Lake; WMATA mitigation area, East Farm.

Eleocharis obtusa (Willd.) Schult.—blunt spikerush.

Infrequent to occasional: wet places, Airport; Beck Lake area; Wetland Research Forest.

Eleocharis olivacea Torr.—olive spikerush.

Rare to infrequent: shore of Beck Lake, Coniferous Research Forest.

Eleocharis quadrangulata (Michx.) Roem. & Schult.—square-stem spikerush.

Rare: Airport.

Eleocharis tenuis (Willd.) Schult.—slender spikerush.

Infrequent: wet places, Entomology Road; Building 465 meadow, Central Farm.

Kyllinga gracillima Miq.

C. brevifolioides Thieret & Delahoussaye

Infrequent to occasional: swampy meadow by Building 465, Entomology Road; along ditch, North Farm; Building 011A upland meadow.

Rhynchospora capitellata (Michx.) Vahl

Infrequent: wet meadows, poorly drained places, mainly on East Farm.

Rhynchospora gracilentia A. Gray

Rare: Powerline Bogs 1 and 2, Deciduous Research Forest.

Rhynchospora microcephala (Britton) Britton ex Small

Rare: Powerline Bog 2, Deciduous Research Forest.

Schoenoplectus pungens (Vahl) Palla

Scirpus pungens Vahl

Common three-square. Rare: WMATA Mitigation Area, East Farm.

Schoenoplectus purshianus (Fernald) M.

Strong—Pursh's bulrush.

Scirpus purshianus Fernald

Rare: Beck Lake area, Coniferous Research Forest.

Schoenoplectus validus (Vahl) Å. Löve & D.

Löve—Great bulrush.

Scirpus validus Vahl

Rare: WMATA Mitigation Area, East Farm.

Scirpus cyperinus (L.) Kunth—woolgrass sedge, cottongrass bulrush.

Occasional: wet places.

Scirpus georgianus Harper

Infrequent to occasional: wet places.

Scirpus polyphyllus Vahl—leafy bulrush.

Rare: wet places, Entomology Road area.

List of the flora
Class Liliopsida—Monocotyledons
Juncacaceae

Dioscoreaceae

Dioscorea oppositifolia L.—Chinese yam.
D. batatas Decne.
Rare: locally abundant at bridge over Beaver
Dam Creek, Central Farm.

Dioscorea quaternata J.F. Gmel.—wild yam.
Recorded in 1976; not seen in recent years.
Dioscorea villosa L. wild yam. Rare: forest along
Beaver Dam Creek swamp, Research Road,
Central Farm.

Hemerocallidaceae

Hemerocallis fulva (L.) L.—orange daylily.
Common: escape from cultivation.

Hypoxidaceae

Hypoxis hirsuta (L.) Coville—yellow stargrass.
Infrequent in fields, meadows.

Iridaceae

Iris versicolor L.—northern blue flag.
Rare: Beaver Dam Creek swamp at Research
Road, Central Farm.
Sisyrinchium angustifolium Mill.—blue-eyed-
grass.
Sisyrinchium graminoides E.P. Bicknell
Common: meadows and fields.

***Sisyrinchium bellum** S. Watson—blue-eyed-
grass.
Planted: National Agricultural Library meadow.

Juncaceae

Juncus acuminatus Michx.
Rare: Poultry Road Infield Meadow, Central
Farm; Wetland Research Forest.
Juncus brachycarpus Engelm.
Rare: Building 465 Meadow on Entomology
Road.

Juncus canadensis J. Gay ex Laharpe—Canadian
rush.
Infrequent: wet places, Entomology Road area;
Beck Lake area; Airport.

List of the flora

Class Liliopsida—Monocotyledons

Juncaceae

Juncus diffusissimus Buckley

Rare: Airport Meadow.

Juncus dudleyi Wiegand—Dudley's rush.

J. tenuis var. *dudleyi* (Wiegand) F.J. Herm.

Infrequent: forest near Entomology Road; entrance to the Airport; meadow near National Agricultural Library.

Juncus effusus L. var. **solutus** Fernald & Wiegand—soft rush.

Occasional: wet places; sometimes weedy.

Juncus marginatus Rostk.

Infrequent: Entomology Road; Powerline Meadow, Central Farm.

Juncus scirpoides Lam.

Infrequent: Powerline Meadow; Building 465 Meadow, Central Farm.

Juncus secundus P. Beauv. ex Poir.

Infrequent: wet places along Poultry Road and elsewhere, Central Farm.

Juncus subcaudatus (Engelm.) Coville & S. F. Blake

Infrequent: Powerline Meadow, Central Farm; Powerline bogs, Deciduous Research Forest; Airport.

Juncus tenuis Willd.—path rush.

Common: meadows and fields.

Luzula bulbosus (A.W. Wood) Smyth & L.C.R. Smyth—bulbous wood rush.

Infrequent: edges of forests and in meadows in the Central Farm.

Luzula multiflora (Ehrh.) Lej.—common wood rush.

Infrequent: Beck Lake forest; entrance to Airport; Oak Barren N Meadow; Beef Barren Savanna, Central Farm.

Lemnaceae

Lemna gibba L.—swollen duckweed.

Rare: pond, Central Farm.

Lemna minor L.—common duckweed.

Rare: pond near entrance to Airport, in waste-water complex.

Lemna perpusilla Torr.—minute duckweed.

Rare: waste-water complex, Central Farm.

Lemna turionifera Landolt—turion duckweed.

Common: most ponds.

Spirodela polyrhiza (L.) Schleid.—common duckmeat or greater duckweed.

Common: ponds.

Wolffia brasiliensis Wedd.—wolffia.

Common: most ponds.

Liliaceae

Convallaria majalis L.—lily of the valley.

Escaped from cultivation near entrance to the Airport.

Erythronium americanum Ker Gawl.—trout lily.

Occasional in rich forests.

Lilium superbum L.—turk's-cap lily.

Rare: formerly in Indian Creek swamp forest; seen in 1983. Not seen in recent years.

Liriope graminifolia (L.) Baker—grassy lily-turf.

Escaped from cultivation along Beaver Dam Road near the Plant Materials Center.

Liriope spicata (Thunb.) Lour.—spiked lily-turf.

Escaped from cultivation in forest north of Beck Lake.

List of the flora
Class Liliopsida—Monocotyledons
Orchidaceae

Maianthemum canadense Desf.—Canada
mayflower.

Infrequent: moist forests; Indian Creek swamp
forest.

Medeola virginiana L.—Indian cucumber root.
Occasional: rich forests.

Muscari botryoides (L.) Mill.—common grape-
hyacinth.

Occasional: lawns, fields, and meadows.

Narthecium americanum Kew Gawl.—bog-
asphodel.

Beltsville Bog: *E. H. Walker 1330*, 14 Sep 1930
(MARY); however, a note by Russell Brown
states that the species was probably planted
there. In Maryland this species is known only
from the Eastern Shore.

Ornithogalum umbellatum L.—star-of-
Bethlehem.

Occasional: lawns, meadows, spreading in
fields.

Polygonatum biflorum (Walter) Elliott—true
solomon's seal.

Infrequent to occasional: rich forests; Beaver
Dam Road; Entomology Road. Apparently

much eaten by deer; sometimes seen in
vegetative state only.

Smilacina racemosa (L.) Desf.—false solomon's
seal.

Maianthemum racemosum (L.) Link

Infrequent to occasional: rich forests;

Entomology Road; Beaver Dam Road.

Apparently much eaten by deer; sometimes
seen in vegetative state only.

Tofieldia racemosa (Walter) Britton, Sterns &
Poggenb.—coastal false asphodel.

Rare: Beltsville Bog (*E. H. Walker 99*, 5 Aug
1928, MARY). Extirpated long ago.

Uvularia perfoliata L.—perfoliate bellwort.

Rare: rich forests; Beaver Dam Road forest, seen
in 1983. Not seen in recent years.

Uvularia sessilifolia L.—sessile-leaved bellwort.

Rare or infrequent: Indian Creek swamp forest.

Veratrum viride Aiton—American false
hellebore.

Rare but locally frequent in Indian Creek swamp
forest.

Orchidaceae

Cypripedium acaule Aiton—pink or stemless
lady slipper.

Rare or infrequent: forests. Much less frequent
in recent years; perhaps eaten by deer. Not seen
anywhere in 1999.

Galearis spectabilis (L.) Raf.—showy orchis.
Orchis spectabilis L.

Rare: formerly in Deciduous Research Forest,
but not seen in recent years.

Goodyera pubescens (Willd.) R. Br. ex W.T.
Aiton—downy rattlesnake-plantain.

Infrequent: rich forests; Beaver Dam Road;
Entomology Road.

Isotria verticillata Raf.—whorled pogonia.

Rare: formerly (1976) in Deciduous Research
Forest, but not seen in recent years.

Platanthera flava (L.) Lindl. var. **herbiola** (R.

Br. ex W.T. Aiton) Luer—pale green orchid.

Habenaria flava (L.) R. Br.

Rare: powerline swamp, Deciduous Research
Forest.

Platanthera lacera (Michx.) G. Don—ragged
fringed orchid.

Habenaria lacera (Michx.) R. Br.

Rare: meadow near Poultry Road, Central Farm.

List of the flora

Class Liliopsida—Monocotyledons

Orchidaceae

Spiranthes praecox (Walter) S. Watson—ladies' tresses.

Rare: Secret Meadow, Poultry Road, Central Farm. Identification tentative; this and the following species are difficult to separate.

Spiranthes vernalis Engelm. & A. Gray—ladies' tresses.

Rare: meadow, Entomology Road. Identification tentative; see preceding species.

Tipularia discolor (Pursh) Nutt.—crane-fly orchid.

Infrequent: forests; Beaver Dam Road; Entomology Road.

Poaceae

Agrostis canina L.—velvet bent.

Rare: Poultry Road Outfield Meadow, Central Farm.

Agrostis capillaris L.—Rhode Island or colonial bent grass.

A. tenuis Sibth.

Occasional: meadows, fields, and lawns, especially near National Agricultural Library.

Agrostis gigantea Roth—redtop.

A. alba of authors

Common: fields and meadows.

Agrostis hyemalis (Walter) Britton, Sterns & Poggenb.—ticklegrass.

Rare: weedy area at Airport.

Agrostis perennans (Walter) Tuck.—upland bent grass.

Occasional: autumn grass in fields and meadows.

Agrostis scabra Willd.—rough bent.

Occasional: late summer and autumn grass in fields and meadows.

Agrostis stolonifera L.—creeping bent.

Occasional: moist or wet places in grassy places and open forests.

Aira caryophylla L.—silver hair grass.

Common: poorest soils of lawns and meadows.

Alopecurus aequalis Sobol.—short-awn alopecurus.

Infrequent: cornfield, South Farm; weedy area at Airport.

Andropogon virginicus L.—broomsedge.

Common: meadows, fields, roadsides.

Andropogon glomeratus (Walter) Britton, Sterns, & Poggenb.

A. virginicus L. var. *abbreviatus* (Hack.) Fernald & Griscom

Infrequent: open area, Deciduous Research Forest; ditch, Soil Conservation Road.

Anthoxanthum odoratum L.—sweet vernal grass.

Common and abundant: lawns, meadows, fields, roadsides.

Aristida dichotoma var. *curtissii* A. Gray ex S. Watson & J.M. Coult.—Curtiss's three-awn grass.

A. curtissii (A. Gray ex S. Watson & J.M. Coult.) Nash

Infrequent to occasional: meadows and fields, including Airport.

Aristida oligantha Michx.—prairie three-awn grass.

Occasional: fields; especially Airport.

Arrhenatherum elatius (L.) P. Beauv. ex J. Presl & C. Presl—tall oatgrass.

Formerly meadow, Soil Conservation Road; no present location known.

Arthraxon hispidus (Thunb.) Makino—small carp grass or arthraxon.

Common and locally abundant: invasive pernicious weed in moist or wet meadows, roadsides, and open forests.

List of the flora
Class Liliopsida—Monocotyledons
Poaceae

- Avena sativa** L.—oats.
Established around building at Dairy Barns,
Central Farm.
- Bromus catharticus** Vahl—rescue grass.
B. unioloides Kunth
Infrequent: meadows near National Agricultural
Library; around Building 182C, North Dairy
Road, Central Farm; cornfield, SCS Road.
- Bromus commutatus** Schrad.—hairy chess,
meadow brome.
Infrequent: weedy around buildings on North
Dairy Road, Central Farm, and elsewhere.
- Bromus hordeaceus** L.—soft chess or brome.
B. mollis L.
Infrequent: Airport and other weedy places.
- Bromus inermis** Leyss.—smooth brome.
Occasional: roadsides, meadows and fields;
planted in several locations on East Farm.
- Bromus japonicus** Thunb.—Japanese brome or
chess.
Occasional to common: weedy in fields and
waste places.
- Bromus racemosus** L.—smooth brome.
Occasional: roadsides and waste places.
- Bromus sterilis** L.—barren or poverty brome.
Occasional: roadsides and waste places.
- Bromus tectorum** L.—cheatgrass, downy chess.
Occasional: roadsides and waste places.
- Calamagrostis coarctata** (Torr.) Eaton—reed
bent grass.
C. cinnoides of authors
Infrequent: moist, shaded places, bogs, Beaver
Dam Road powerline, Deciduous Research
Forest powerline, Beck Lake area; powerline
bogs.
- Cenchrus longispinus** (Hack.) Fernald
Rare: locally abundant on roadside, Springfield
Road.
- ***Chasmanthium latifolium** (Michx.) H.O.
Yates—Indian wood oats.
Uniola latifolia Michx.
Planted: meadows.
- Chasmanthium laxum** (L.) H.O. Yates—slender
wood oats.
Uniola laxa L.
Occasional: moist meadows, edges, open forests,
under powerlines.
- Chloris verticillata** Nutt.—windmill grass.
Spreading in meadows near National
Agricultural Library; apparently adventive or
introduced.
- Cinna arundinacea** L.—sweet wood reed.
Common, sometimes locally abundant: lowland
forests, bottomlands, stream valleys.
- Cynodon dactylon** (L.) Pers.—bermuda grass.
Common: planted or escaped from cultivation in
lawns, meadows, roadsides, and fields;
- Dactylis glomerata** L.—orchard grass.
Common: lawns, meadows, and fields.
- Danthonia spicata** (L.) P. Beauv. ex Roem. &
Schult.—poverty grass.
Common: poor soil in meadows, fields, and open
forests. One collection from South Farm
resembles *D. compressa* Austin, but is less
extreme in morphology.
- Digitaria ciliaris** (Retz.) Koeler—southern
crabgrass.
Occasional: intergrading with *D. sanguinalis*.
- Digitaria ischaemum** (Schreb.) Schreb. ex
Muhl.—smooth crabgrass.
Common and abundant: weedy in lawns and
fields.
- Digitaria sanguinalis** (L.) Scop.—hairy
crabgrass.
Common and abundant: weedy in lawns and
fields.

List of the flora

Class Liliopsida—Monocotyledons

Poaceae

Echinochloa colona (L.) Link—awnless barnyard grass, jungle-rice.

Occasional: along railroad by Sunnyside Road; temporary pool in lawn, Poultry Road; ditch E of Building 011A; around a man-made pond near Springfield Road, Central Farm; waste-water treatment area, Central Farm. Species not included by Brown and Brown (1984).

Echinochloa crus-galli (L.) P. Beauv.—barnyard grass.

Common: open places and fields.

Echinochloa muricata (P. Beauv.) Fernald var. **muricata**—rough barnyard grass.

Rare: moist places; Deciduous Research Forest (collected only in 1976).

Echinochloa muricata var. **microstachya** Wiegand

Rare: border of Indian Creek swamp forest.

Eleusine indica (L.) Gaertn.—goose grass.

Common: weedy in lawns and fields.

Elymus repens (L.) Gould—quackgrass.

Agropyron repens (L.) P. Beauv.

Elytrigia repens (L.) Desv. ex Nevski

Common: lawns, fields and meadows; pernicious rhizomatous weed.

Elymus riparius Wiegand—riverbank wildrye.

Rare: bank of Little Paint Branch Creek, North Farm.

Eragrostis cilianensis (All.) Vignolo ex Janch.—stinkgrass.

Occasional: weedy in cultivated fields and waste places.

Eragrostis curvula (Schrud.) Nees—weeping lovegrass.

Planted for erosion control, occasionally adventive or persisting.

Eragrostis hirsuta (Michx.) Nees—big-top lovegrass.

Rare: meadows south of National Agricultural Library.

Eragrostis pectinacea (Michx.) Nees var. **pectinacea**—lovegrass.

Common: waste places, paved areas.

Eragrostis spectabilis (Pursh) Steud.—purple lovegrass.

Common: fields and meadows.

Festuca arundinacea Schreb.—tall fescue.

Common and abundant: widely planted, also escaped from cultivation; lawns, meadows, roadsides

Festuca filiformis Pourr.—hair fescue.

F. ovina var. *capillata* (Lam.) Mathieu

F. tenuifolia Sibth.

Rare: Poultry Road oak savanna, probably a remnant of cultivation.

***Festuca ovina** L.—sheep fescue.

Planted: meadows of North Farm and National Agricultural Library.

Festuca rubra L.—red fescue.

Occasional to common: meadows, lawns, pastures.

Festuca rubra var. **commutata** Gaudin—Chewings fescue.

Locally abundant in meadows near National Agricultural Library, probably elsewhere.

Festuca subverticillata (Pers.) E.B. Alexeev—nodding fescue.

F. obtusa Biehler

Infrequent: forest east of Entomology Road; Indian Creek forest.

Festuca trachyphylla (Hack.) Krajina—hard fescue.

Locally common in meadows adjacent to National Agricultural Library. Determined by Darbyshire.

Glyceria obtusa (Muhl.) Trin.—manna grass.

Infrequent: moist or wet places, bogs; Deciduous and Coniferous Research Forests.

List of the flora
Class Liliopsida—Monocotyledons
Poaceae

Glyceria striata (Lam.) Hitchc.—fowl meadow grass, fowl manna grass.

Occasional: ditches, wet forests, and other wet places.

Holcus lanatus L.—velvet grass.

Occasional: weedy in lawns, pastures, and meadows.

Hordeum jubatum L.—foxtail barley.

Rare: grassy areas at the Airport.

Hordeum pusillum Nutt.—little barley.

Occasional: weedy on roadsides and in waste places.

Leersia oryzoides (L.) Sw.—rice cut grass.

Common: ditches, marshes, and swamps.

Leersia virginica Willd.—white grass.

Common: wet and moist open or partly shaded places.

Leptoloma cognatum (Schult.) Chase—fall witch grass.

Rare, but locally abundant in meadows near National Agricultural Library.

Lolium multiflorum Lam.—annual ryegrass.

L. perenne L. subsp. *multiflorum* (Lam.) Husn.

Occasional: waste places, lawns, and fields; also planted.

Lolium perenne L.—perennial ryegrass.

Common: lawns and some meadows; also planted.

Microstegium vimineum (Trin.) A. Camus—

cover-all grass, stilt grass, Nepalese browntop.

Common and abundant: invasive pernicious weed densely covering the ground in shaded places, powerlines, roadsides, and open forests.

Miscanthus sinensis Andersson—Chinese silver grass, eulalia.

Planted: ornamental and persisting after cultivation.

Muhlenbergia schreberi J. G. Gmel.—nimblewill.

Common: weedy in lawns, roadsides, and meadows.

Panicum.

Includes subg. *Dichanthelium*. Treatment and most determinations by M. G. Lelong; see Lelong (1984).

Panicum acuminatum Sw. var. *fasciculatum* (Torr.) Beetle

P. huachucae Ashe

Occasional: meadows, fields.

Panicum acuminatum var. *implicatum* (Scribn.)

C. F. Reed

Rare: field at Airport.

Panicum acuminatum var. *lindheimeri* (Nash)

Lelong

P. lindheimeri Nash

Common: meadows, fields.

Panicum anceps Michx. var. *anceps*—beaked panic grass.

Occasional: meadows and roadsides.

Panicum boscii Poir.—Bosc's panic grass.

Rare: forest along Entomology Road.

Panicum capillare L.—common panic grass, witch grass.

Occasional: weedy in disturbed soil.

Panicum clandestinum L.—deer-tongue grass.

Dichanthelium clandestinum (L.) Gould

Common: meadows and fields.

Panicum commutatum Schult. var. *ashei*

(Pearson ex Ashe) Fernald—variable panic grass.

Rare: oak forest, South Farm.

Panicum depauperatum Muhl.—starved panic grass.

Dichanthelium depauperatum (Muhl.) Gould

Rare to infrequent: fields.

Panicum dichotomiflorum Michx.—fall panic grass.

Common and locally abundant: weedy in fields and disturbed soil.

List of the flora
Class Liliopsida—Monocotyledons
Poaceae

Panicum dichotomum L. var. **dichotomum**—
bushy panic grass.

Dichanthelium dichotomum (L.) Gould

Rare: oak forest near Airport.

Panicum dichotomum var. **lucidum** (Ashe)

Lelong

P. lucidum Ashe

Infrequent: wet places, Deciduous Research
Forest, East Farm.

Panicum dichotomum var. **ramulosum** (Torr.)

Lelong

P. microcarpon Muhl. ex Elliott

Common: meadows, fields, forests.

Panicum rigidulum Bosc ex Nees var.

elongatum (Pursh) Lelong

P. stipitatum Nash

Infrequent: Wetland SE of intersection of Beaver
Dam Road and Research Road; Beaver Dam
swamp.

Panicum rigidulum var. **rigidulum**

P. agrostoides Spreng., nom. illeg.

Infrequent: Building 465 Meadow, Central
Farm; other meadows.

Panicum scoparium Lam.

Dichanthelium scoparium (Lam.) Gould

Occasional: fields and meadows.

Panicum sphaerocarpon Elliott var. **isophyllum**

(Scribn.) Angelo

P. polyanthes Schult.

Occasional to common: deciduous forests,
meadows.

Panicum verrucosum Muhl.—warty panic grass.

Infrequent: poorly-drained places.

Panicum virgatum L.—switch grass.

Common: meadows, fields, edges; sometimes
persisting from plantings on East Farm.

Paspalum dilatatum Poir.—dallis grass.

Infrequent: roadside, Entomology Road; Oak
Barren; Center Meadow, Central Farm.

Paspalum laeve Michx.—smooth paspalum.

P. circulare Nash

Common: lawns, fields, meadows, roadsides.

Paspalum setaceum Michx. (sens. lat.)—slender
paspalum.

P. ciliatifolium Michx.

P. pubescens Muhl. ex Willd.

Occasional: fields, meadows, roadsides, and
lawns.

Phalaris arundinacea L.—reed canary grass.

Occasional: wet or moist meadows; planted in
waste-water spray fields.

Phleum pratense L.—timothy.

Common: fields and meadows.

Phragmites australis (Cav.) Trin. ex Steud.—
giant or common reed.

P. communis Trin.

Occasional: ditches and wet places.

Poa annua L.—annual bluegrass.

Common: weedy in lawns and cultivated fields.

Poa compressa L.—Canada bluegrass.

Common: meadows and open places.

Poa pratensis L. subsp. **angustifolia** (L.) Lej.—
narrow-leaved Kentucky bluegrass.

Rare or infrequent: Airport field.

Poa pratensis L. subsp. **pratensis**—Kentucky
bluegrass.

Common and abundant: spreads aggressively in
lawns, pastures, hayfields, and meadows.

Poa trivialis L.—rough-stemmed bluegrass.

Occasional: moist places.

Schizachyrium scoparium (Michx.) Nash—little
bluestem.

Andropogon scoparius Michx.

Infrequent to occasional: older meadows;
established in meadows near National
Agricultural Library, where an important part
of the meadow flora.

Secale cereale L.—rye.

Occasional: escape in cultivated fields and
meadows.

List of the flora
Class Liliopsida—Monocotyledons
Potamogetonaceae

- Setaria faberi** R. Herm.—giant foxtail.
Common: weedy in cultivated fields.
- Setaria italica** (L.) P. Beauv.—foxtail millet.
Sown in 1997: roadside and forest border,
junction Springfield and Powder Mill Roads,
East Farm.
- Setaria parviflora** (Poir.) Kerguélen—knotroot
foxtail.
S. geniculata (Lam.) P. Beauv.
Infrequent: fields, Airport; waste-water
treatment area.
- Setaria pumila** (Poir.) Roem. & Schult.—yellow
foxtail.
S. glauca (L.) P. Beauv.
Common and abundant: weedy in lawns,
meadows, and cultivated fields.
- Setaria viridis** (L.) P. Beauv.—green foxtail.
Common and abundant: weedy in lawns,
meadows, and cultivated fields.
- Sorghastrum nutans** (L.) Nash—Indian grass.
Infrequent: meadows, roadsides and powerlines.
- Sphenopholis nitida** (Biehler) Scribn.—
wedgegrass.
Rare: formerly along Sellman Road, bordering
North Farm; not seen in recent years.

- Sporobolus vaginiflorus** (Torr. ex A. Gray) A.W.
Wood—poverty dropseed.
Infrequent: roadsides and waste places; Airport.
- Tridens flavus** (L.) Hitchc.—purpletop.
Common and abundant: fields, meadows and
roadsides.
- Tripsacum dactyloides** (L.) L.—gama grass.
Occasional: roadsides, fields; sometimes locally
abundant as at Airport.
- Triticum aestivum** L.—wheat.
Occasional: escape in cultivated fields and
meadows.
- Vulpia myuros** (L.) C.C. Gmel.—rat-tail six-
weeks grass.
Occasional: grassy places.
- Vulpia octoflora** (Walter) Rydb.—six-weeks
grass.
Infrequent to occasional: grassy places,
meadows, under powerlines
- Zoysia japonica** Steud.—zoysia grass.
Planted: sometimes spreading.

Pontederiaceae

- Pontederia cordata** L.—pickerel-weed.
Rare: swamp along Beaver Dam Creek, east of
Research Road, Central Farm.

Potamogetonaceae

- Potamogeton diversifolius** Raf.—variable
pondweed.
Beck Lake; Beaver Dam Creek at Soil
Conservation Road, East Farm.
- Potamogeton pusillus** L.—small pondweed.
Beck Lake.
- Zannichellia palustris** L.—horned pondweed.
Pond near Entomology Road.
-

List of the flora
Class Liliopsida—Monocotyledons
Smilacaceae

Smilacaceae

Smilax glauca Walter—sawbrier.

Occasional: forests. Usually only one or a few plants at a site.

Smilax herbacea L.—carrion flower.

Rare: forest near Beaver Dam Creek, Central Farm.

Smilax rotundifolia L.—horsebrier.

Common: forests and edges.

Sparganiaceae

Sparganium americanum Nutt.—American bur-reed.

Infrequent: Beck Lake; Beaver Dam Creek at Soil Conservation Road, East Farm.

Typhaceae

Typha angustifolia L.—narrowleaf cattail.

Rare: National Agricultural Library pond.

Typha latifolia L.—broad-leaf cattail.

Common: ditches and wet places.

Xyridaceae

Xyris difformis Chapm.—yellow-eyed grass.

Rare: powerline bogs, Deciduous Research Forest.

Xyris torta Sm.—slender yellow-eyed grass.

Infrequent: poorly-drained area under powerline, Deciduous Research Forest; formerly Airport bog.

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